

**DIRECTORY OF AFRICAN ENVIRONMENTAL
EXPERTS AND LIST OF INSTITUTIONS
ON ENVIRONMENTAL MATTERS IN AFRICA**

Edition I (1984-1986)

LC-NAIROBI



UNITED NATIONS

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INTRODUCTION

Since the historic Stockholm Conference on the Human Environment (1972), environmental considerations as an integral development planning has increasingly become a major policy issue in Africa. This has featured prominently in ECA work programme and in discussions at ECA Conferences of Ministers. At these Conferences a number of resolutions on environmental matters have been passed, notable among which was resolution 474(XVIII) on the Strengthening of environmental capabilities and of regional cooperation on environmental matters in Africa, adopted in April 1983. This resolution, inter alia, called upon African Governments to:

"organize massive human resources development programmes to train the scientists, technicians, planners, policy-makers, industrial managers in environmental assessment and management techniques, needed for the (United Nations) Industrial Development Decade (for Africa, 1980-1990)".

The Joint Intergovernmental Regional Committee on Human Settlements, and Environment (JIGRC/HUS/ENV), a policy organ of the Commission on environmental matters, considered specialist as a trained professional in environment-related subjects who is actively engaged in solving problems for the protection of the environment at any level. It was decided that, since most environmental problems require a multidisciplinary approach for their solution, any directory of environmental specialists must take this into account. Considering this, a questionnaire was prepared to be as comprehensive as possible. This questionnaire was completed by a wide range of professionals and technicians in government service, at universities, research institutions and at corporate parastatal bodies, who were involved in activities geared towards the protection of the environment. Furthermore, since the field of environmental assessment and management is relatively new in the African development efforts, it is expected that environmental specialists as defined above, would be actively involved in a variety of tasks aimed at protecting the environment, such tasks would involve formulating and implementing environmental policies and laws; planning and executing environmental projects; developing environmental education and training projects; carrying out environmental impact assessment of development projects and cost-benefit analysis of industrial projects; engaging in chemical/biological monitoring of the air, water, soils, seas, for pollutants, and for toxic substances in food, drink, drugs and fodder; involvement with conservation and sound management of natural resources (water, forests, rangelands, minerals, fisheries, wildlife, soils, woodlands) for sustainable yield and use; combating desertification and drought impacts; and rehabilitation of mining and other degraded sites.

The Directory does not represent a comprehensive and detailed listing of all African specialists in the field of Environment. This is so

because the response to our survey questionnaire in this first attempt has not been as wide as was expected. We hope therefore that the second edition will contain a more comprehensive list of environmental specialists if the questionnaires that we are sending out again are all completed and sent back to ECA.

The main objectives of the Directory can be stated as follows:

- (a) To promote collaboration between national environmental machineries at the subregional and regional levels by providing information on the addresses of such institutions.
- (b) To identify African environmental specialists who have been engaged in various capacities at universities, government research institutions or working with non-governmental organizations (NGOs) to solve local environmental problems.
- (c) To promote and develop technical cooperation to solve environmental problems common to neighbouring or to a group of African countries, through the exchange of experts, environmental information, technology and expertise.

The Directory is an initiative which should help ECA member States to promote technical cooperation themselves, particularly in the area of expertise in solving environmental problems. It should also be of assistance to members of the United Nations system and international organizations as a reference for consultants on environmental projects. The Directory will also serve as a planning tool for the development of the environmental manpower capability required for the implementation of the Industrial Development Decade for Africa and for the protection of the African environment in general.

ALGERIA

Name and Address of Government Environmental
Co-ordination Machinery

Direction de la Sauvegarde des Ressources
Biologiques Naturelles,
Secretariat D'Etat Aux Forets et
a la Mise en valeur Des Terres,
Alger, Algerie.

ANGOLA

Name and Address of Government Environmental
Co-ordination Machinery

Direccao Nacional de conservacao
de Naturala,
Ministerio da Agricultura,
Luanda, Angola.

BENIN

Name and Address of Government Environmental
Co-ordination Machinery

Division de la Gestion, des
Resources et Etudes des Impacts,
Service de l'Amenagement du
Territoire et Environnement,
Ministere du Plan,
Cotonou, Benin.

EXPERTS:

1. Name: BAGLO, Ayita Marcel

- Institutional address:

Comite National MAB,
Ministere des Enseignements Moyens
et Supérieur,
B.P. 348, Cotonou.

- Professional qualifications:

- a) Diplome UNESCO sur l'Ecologie et Amenagement integre des
territoires, Paris, 1983;
- b) Diplome d'Etudes Superieures Specialisees d'Ecologie et
d'Amenagement des milieux naturels, Toulouse, 1983;
- c) Diplome d'Etudes Superieures Approfondies d'Ecologie et
d'Amenagement du milieux naturel, Toulouse, 1984.

- Publications:

- a) "Deux exemples d'amenagement cotier non coordonne en
Republique Populaire du Benin: la construction du Port
et du Barrage de Cotonou". pour UNESCO, Toulouse, 1983;
- b) "Incidences de la construction du barrage de Cotonou sur
les activites piscicoles". Bulletin du CIEH No. 52,
Ouagadougou, 1983.
- c) "Construction et l'etude ecologique de la mangrove du
littoral beninois". Toulouse, 1984.

- Work experience:

- a) Responsable par interim du Groupe Pluridisciplinaires
pour l'etude des ecosystemes cotiers du Comite National
MAB, Benin, 1983-1984;
- b) Chef de la Division Environnement et Developpement du
Comite National MAB, 1984-1985;
- c) President du Comite National MAB-UNESCO, depuis 1985.

- Research experience:

- a) Degradation du milieu lagunaire sud-est beninois par la suite de l'intervention anthropique.
- b) Grands equilibres ecologiques de la mangrove du Benin.
- c) Erosion cotiere et protection littorale en Republique Polulaire du Benin.
- d) Integration du parametre environnement dans la planification urbaine.
- e) Gestion des ordures menageres dans les villes du tiers-monde.

2. Name: BOKO, Michel

- Institutional address:

Universite Nationale du Benin,
Departement de Geographie,
B.P. 526, Cotonou.

- Professional qualifications:

- a) Licence-es-Lettres, option Geographie, Dijon, France, (1972);
- b) Maitrise de Geographie Rurale, Dijon, (1973);
- c) Certificat de Geomorphologie, Dijon, (1973);
- d) Doctorat de Troisieme Cycle de Geographie Tropicale, Dijon (1975).

- Publications:

- a) "Nature et vie rurale dans le secteur central du littoral du Benin." Le courrier de la Recherche au Benin. Bulletin de Liaison No.4. (Cotonou), 1983.
- b) "Relations Habitat-Environnement laguno-littoral". Comite National MAB-PHI-PICG, 1981, Bulletin MAB No.1 1984 Cotonou.

- Work experience:

- b) Seminaire national sur la perception de l'environnement, organise par le Comite National MAB-PHI-PICG a Cotonou, 21 au 28 Janvier, 1981.
- c) Symposium No.23 du 25eme Congres de l'UGI sur "Climatologie Tropicale et Etablissements Humains", Dijon, France, 22 au 30 Aout, 1984.
- d) Seminaire national sur la secheresse et la desertification au Benin, Parakou, Benin, 3 au 9 Avril, 1985.

- Research experience:

- a) Participation aux recherches pluridisciplinaires sur les ecosystemes a mangroves (sud-ouest du littoral du Benin de 1978 a 1981;
- b) Milieux littoraux a mangrove du Benin - groupe

- pluridisciplinaire du Comité MAB;
- c) La variabilité des climats et ses conséquences socio-économiques: séminaire de Parakou.
 - d) La pluviométrie dans le Golfe du Bénin. Symposium No. 23 du 25^{ème} Congrès de l'Union Géographique Internationale (UGI).
 - e) Membre du groupe pluridisciplinaires du comité MAB sur les milieux littoraux mangroves du Bénin.

African Environmental Experts:

E/ECA/ENV/38, December 1986.

BOTSWANA

Name and Address of Government Environmental
Co-ordination Machinery

Department of Town and
Regional Planning
Private Bag 0042
Gaborone, Botswana

EXPERTS

1. Name: LETSHOLO, Joseph M.

- Institutional address:

Dept. of Town and Regional Planning,
P.M.B. 0042,
Gaborone, Botswana.

- Professional qualifications:

- a) Dip. Urban Planning (1979)
- b) Dip. Town Planning (1982);
- c) MSc. Urban Planning Studies. (1982)

- Publications:

- i) Planning education in Botswana -Needs and opportunities - African urban quarterly
- ii) New towns of Botswana - Botswana notes and records 1980
- iii) Integrated land development and national economic and social development plan: Methods and techniques suitable for the African geo-economic context - paper presented to ECA groups of experts meeting, December 1985

- Work experience:

- i) 1979-1980 asst. planner, Ministry of Local Govt. & Lands, Botswana
- ii) 1982-1985 Planner, Ministry of Local Govt. & Lands
- iii) 1985 - present, Dept. of Town and Regional Planning, Botswana

- Research experience:

- i) Preparation of Physical Development Plans for Botswana's Planning Areas
- ii) Part of a team preparing a national conservation strategy for Botswana

iii) Presently working on a national
settlement plan for Botswana

2. Name: Prof. Richard HARTLAND-ROWE

- Institutional address:

University of Botswana
Private Bag 0022
Gaborone, Botswana

- Professional qualifications:

- a) B.Sc. London University (1952)
- b) Ph.D. London University (1957)

- Publications:

The ecology of macrobenthic invertebrates in
Hartley Creek Northeastern Alberta. Publ.
by the Alberta Oil Sands Environmental Research
Program. Report 49 (144 pages) Authors:
Hartland-Rowe, Davies, McElhone and Crowder

- Work experience:

- 1) Ecological work in fresh-waters 1952-1985
including consulting work for oil companies
in Western Canada (impact assesment) and for
the Federal Government of Canada (impact of
sewage on aquatic ecosystems in the North
West Territories of Canada)

- Research experience:

- i) Baseline studies of aquatic fauna in
Northern Canada (1973-1976)
- ii) Ecological studies of a mayfly species
in Uganda (1982-85)
- iii) Ecological studies on temporary waters
in Botswana (1984-85)

3. Name: Prof. H.J. COOKE

- Institutional address:

University of Botswana
P.O.Box 0022
Gaborone, Botswana

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- Professional qualifications: BA(Hons) Manchester 1948
Ph.D. (East Africa) 1969

- Publications:

The struggle against environmental degradation
Botswana's experience - Desertification Control
UNEP, No.8 pp.9-16 - 1983

- Work Experience:

Administrator & Teacher in Africa since 1951
(Tanzania & Botswana)

- Research experience:

Drought monitoring, climatic change
Resource utilisation and conservation
in arid lands.

4. Name: Dr. Susan RINGRDSE

- Institutional address:

Dept. of Environmental Science
University of Botswana P.O.Box 022
Gaborone, Botswana

- Professional qualifications:

B.A. Hons Univ. of London
M.A. Univ. of Manitoba
Ph.D. Univ. of London
Diploma - Soil conservation

- Publications:

- Work Experience:

1974-1980 Rehabilitation of Pits - Quarries,
1980-1983 Environmental impact analyses -
pipgunes etc. - Ontario
1983 to present - monitoring desertification
and remote sensing - Botswana

Research experience:

1972-1980 - Rehabilitation of Pits.
1980-1983-Environmental impact studies of
Pipgunes;
1984 to now - Monitoring desertification
in Botswana

BURKINA FASO

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de l'environnement et du
Tourisme
B.P. 7044
Ouagadougou, Burkina Faso
Tel: 841-65

BURUNDI

Name and Address of Government Environmental
Co-ordination Machinery

Institut National pour la
Conservation de la Nature
B P 2556
Bujumbura, Burundi

CAMEROON (CAMEROUN)

Name and Address of Government Environmental
Co-ordination Machinery

Comite National de l'homme
et la Biosphere (MAB)
Delegation-Generale a la
Recherche Scientifique
et Technique
B. P. 4742
Yaounde, Cameroun

EXPERTS

1. Name: FOCHO, Derek Afa

- Institutional address:

Centre Universitaire de Dchang,
Ecole Nationale Superieure Agronomique,
B.P. 138, Yaounde.

- Professional qualifications:

- a) Licence en Sciences Naturelles, Universite de Yaounde,
(1981).
- b) Maitrise es Sciences (Biologie et Physiologie vegetale),
Universite de Yaounde, (1982).
- c) D.E.A. (Biologie vegetale) Universite de Yaounde, (1983).

- Publications:

- Work experience:

- a) Cadre au Comite National Permanent de l'Homme et la
Biosphere (M.A.B.) Cameroun, 1982/1984.

- Research experience:

- a) Description de la reserve du Dja afin de proposer son
inclusion dans la liste des Patrimoines naturels et
culturelles.

. Name: TANDAP, Lucas T. - F.R.G.S.

- Institutional address:

Environment Section,
Social Development, Environment and
Human Settlements Division,
U.N. Economic Commission for Africa,
P.O. Box 3001,
Addis Ababa, ETHIOPIA.

- Professional qualifications:

- a) Licence-es-Lettres (Histoire-Geographie)
Universite de Yaounde (1968)
- b) Ph.D. - Geography, University of Liverpool (1973),
with specialization in Economic Geography and the
geography of the development process, particularly in
the management of the rural environment;
- c) Remote Sensing Course, EROS Data Centre (NASA),
Sioux Falls, South Dakota, (1979);

- Publications:

- a) The rural development process in the Northwest Province
of Cameroon - Ph.D. Thesis;
- b) "The rural development process: Desiderata for a new
methodology", Yaounde, (1975);
- c) "The evolution of rural settlements in Cameroon."
Ekistiks, 1975;
- d) "Population re-distribution in Cameroon." in
Population Redistribution in Africa; Kosinski(ed),
1979.
- e) Many papers and reports on different aspects of
environmental management as well as on social science
and tropical diseases transmission and control,
presented to the ECA Conference of Ministers, WHO and
OAU Ministers of Health Conference (details can be got
from the secretariats of ECA, OAU and WHO).

- Work experience:

- a) Lecturer, Dept. of Geography, University of Yaounde,
Cameroon, 1971 - 1979;
- b) Associate Professor, University of Yaounde, March, 1979;

- c) Head of Geography Department, University of Yaounde, 1976 - 1979;
- d) Assistant Chief Examiner in Geography for the General Certificate of Education (Cameroon) in collaboration with the London GCE Board;
- f) Supervision of Masters and Doctorate degree students in Geography;
- e) Member of the National Technical Committee for the 1976 Cameroon census;
- g) Seconded to UNECA, Addis Ababa, Ethiopia, as Programme Officer since 1979.

- Research experience:

- a) Development and change in rural environments, their geographical perspectives in Cameroon;
- b) In the area of medical geography;
- c) Urban geography and the geography of urbanization;
- d) The role of transportation in the urbanization process in Cameroon;
- e) Presently working on different approaches to environmental assessment and management in the development and utilization of resources for development, within the context of ECA programme of activities of assistance to member States of the Commission - water resources development, drought desertification, etc, 1979 to present;
- f) participated as collaborating research adviser on the social and economic components of the UNDP/WHO/World Special Programme for Research and Training in Tropical Diseases; member of the Steering committee for the Scientific Working Group on Social and Economic Research of TDR 1979 to present.

CAPE VERDE

Name and Address of Government Environmental
Co-ordination Machinery

Centre for Agrarian Studies
Ministry of Rural Development
Praia, Cape Verde

CENTRAL AFRICAN REPUBLIC (REPUBLIQUE CENTRE AFRICAINE).

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de la Sante
B. P. 83
Banque,
Republic Centre Africaine

EXPERTS:

1. Name: MINOT, Jean-Bernard

- Institutional address:

Institut Polytechnique,
Universite de Bangui,
B.P. 1450,
Bangui.

- Professional qualifications:

a) Diplome d'Ingenieur Geologue-Geophysicien,
(Bucarest, Roumanie - Juin, 1978);

- Publications:

- Work experience:

- a) Assistant a l'Universite de Bangui - enseignement de geophysique generale et appliquee, geologie generale, geomorphologie et metallogenie;
- b) Directeur de l'Institut Polytechnique;
- c) Stage d'informatique (Fortran) Montpellier 1982;
- d) Participation au colloques sur les barrages en terre organisee par l'A.U.R.O.L.F. - Dakar, 1983;
- e) Participation au cours regional sur la teledetection,

- Research experience:

CHAD (TCHAD)

Name and Address of Government Environmental
Co-ordination Machinery

Ministere du Tourisme et de l'Environnement,
Service de L'Urbanisme de
l'Habitat et de l'Environnement
Direction du Cadastre de
l'Urbanisme et de l'Habitat
B. P. 57
Ndjamen, Chad
Phone: 20-83

EXPERTS:

1. Name: BEMBAYE, Leykim Simon

- Institutional address:

Ministere du Tourisme et de
l'Environnement,
B.P. 447, N'djamena.

- Professional qualifications:

- a) Diplome d'Etudes d'Agriculture Tropicale du 2e degre
(DEAT) Abidjan, 1975;
- b) Diplome Superieur de Professionel: Syviculture Tropicale,
Abidjan,
- c) Attestation d'Amenagiste des Ecosystemes Ruraux, Dakar.

- Publications:

- a) Memoire sur la restauration de l'Environnement autour
d'une grande ville, ex. Ndjamen, 1977.

- Work experience:

- a) Cours post-universitaire sur l'environnement;
- b) Conference et seminaires sur l'environnement;
- c) Secretaire General du Comite National MAB.

- Research experience:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

COMOROS

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de l'Equipment
de l'Environnement et de
l'Urbanisme
Moroni, Comoros

CONGO

Name and Address of Government Environmental
Co-ordination Machinery

Direction de l'Environnement
Ministere de la Construction,
De l'Urbanisme, et de
l'Habitat, Charge de
Environnement
Brazaville, Congo

EXPERTS:

1. Name: ISSANGA-NGAMISSINI, Marius

- Institutional address:

B.P. 958, Brazzaville.

- Professional qualifications:

a) Diplome d'Etudes Superieure de Sciences Naturelles,
Mention Oceanographie biologique, 1978.

- Publications:

- Work experience:

a) Directeur de l'Environnement.

- Research experience:

- a) Mise en oeuvre du plan d'intervention d'urgence en cas de pollution par les hydrocarbures, Plan d'Action d'Abidjan.
- b) Surveillance continue de l'environnement marin et cotier en Afrique de l'Ouest - context Plan d'Action d'Abidjan.
- c) Lutte contre l'erosion cotiere en Afrique de l'Ouest-Plan d'Action d'Abidjan.
- d) Identification et mise en place de zones specialement protegees en Afrique de l'Ouest -Plan d'Action d'Abidjan.

2. Name: MABIALA Julien_Felix.

- Institutional address.

Universite Marian Nguabi,
Brazzaville,
CONGO.

- Professional qualifications:

- i) Licence-es-Lettres (Geographie), Bordeaux, 1970;;
- ii) Maitrise de geomorphologie, Bordeaux, 1973;
- iii) Doctorat de 3e cycle, Reims, 1979.

- Publications:

- i) "Etude de al morphologie du site de Brazzaville et ses environs." 1973;
- ii) "Etude geomorphologique de plateau de Mbe et ses bordures, 1979.
- iii) "L'agriculture et l'erosion: problemes du choix des sites." Abidjan, 1984.

- Work experience:

- i) 1970 - 1973: Professeur certifie de lycee, Brazzaville;
- ii) 1973 - 1975: Professeur du Lycee du Drapeau Rouge, Brazzaville;
- iii) 1975 - 1979: Preparation et soutenance de la these de doctorat de 3e cycle, Paris et Reims, France;
- iv) 1979 a ce jour: Professeur de geographie, Faculte des Lettres et des Sciences Humaines, Universite Marien Ngouabi, Brazzaville;
- v) Depuis 1985: Secretaire academique et enseignant dans la mem Faculte.

- Research experience:

Les themes divers en geomorphologie du Congo.

COTE D'IVOIRE

Name and Address of Government Environmental
Co-ordination Machinery

Commission Nationale
de l'Environnement
B. P. V25A
Abidjan, Cote d'Ivoire

African Environmental Experts:
E/ECA/ENV/38, December 1986.

DJIBOUTI

Name and Address of Government Environmental
Co-ordination Machinery

Service de l'Agriculture et
Forets, Ministere de
l'Agriculture et Amenagement
Rural, B. P. 224
Djibouti, Djibouti

EGYPT

Name and Address of Government Environmental
Co-ordination Machinery

Academy of Scientific
Research and Technology
101 Kasr El Aimi St.
Cairo, Egypt

EXPERTS:

- Name: Ismail Abdelfatah Abdelkafy

- Institutional address:

22 Jalaah Haub St. SIS
Cairo, Egypt

- Professional qualifications:

- a) Dip. Arabic Studies
Institute of Arab Studies and
Researches
- b) B.Sc. Political Sciences,

Cairo University, 1976
- c) M.A. Political Sciences,
Cairo University, 1986

- Publications:

- i) Content analysis of the interests of
Egyptian press in environment 1983-1984
environmental sciences, 1985
- ii) The environmental problems of Egypt, research,
The agency of environmental affairs

- Work experience:

Environmental information, cabinet 1982-86
Agency of environmental affairs
Environmental book 1982-1986

- Research experience:

- i) The pollution of environment
the problem of the age, Dar Elmaaref
1982, Cairo
- ii) National report of Egypt Academy of
scientific research Cairo
- iii) the Egyptian man and environment,
newspaper of Messa, 1983-1984 , Cairo

African Environmental Experts:
E/ECA/ENV/38, December 1986.

2. Name: Prof. Mahmoud A. Abu-Zeid.

Institutional address

Chairman,
Water Research Center,
22 El-Galaa St., Bulaq, Cairo,
Egypt.

Professional qualifications:

- a) B.Sc. Civil Eng. (1957) Cairo, Egypt;
- b) M.Sc. Drainage (1960) University of California, USA;
- c) Ph.D. Groundwater (1962) University of California, USA;

Publications:

- i) Long-Distance Water Transfer Chapter 2 on the River Nile Tycooly International, Water Resources Series, Vol. 3, 1983;
- ii) Environment Impacts Assessment for the Aswan High Dam, (UN University Workshop on Environment Impacts Assessment) Guangshow (China) Nov. 1982;
- iii) The River Nile, Its Main Water Transfer Projects in Egypt and its Impacts on Egyptian Agriculture. Task Force on the Transfer of Water from Yangtse River to the North China Plains. Beijing (October - November 1980);

Work experience:

- i) Water Resources Development (1957 - 1962);
- ii) Irrigation and Drainage (1962 - 1975);
- iii) Water Management (19745 - to date);

Research experience:

- i) Environmental Impacts of High Aswan Dam;
- ii) Impacts of Water Management Activities;
- iii) Irrigation and Drainage and their Relations to Water Borne Diseases;

3. Name: Prof. Shafika S. NASSER

- Institutional address:

Professor of Public Health & Nutrition
Faculty of Medicine
Kasr El Eini
Cairo, Egypt

Professional qualifications:

- a) M.B. Ch. B., Cairo University
1960
- b) Diploma Public Health, Cairo
University, 1962
- c) Diploma Industrial Medicine,
Cairo University, 1963
- d) Ph.D., London University, 1967
(in applied nutrition)

Publications:

Water, women's health (1986) - presented in
ECA meeting on socio-economic impact of water
resource mangement, Addis Ababa, 2-8 June 1986

Work experience:

- i) Director of Research Egyptian National
Control of Dianh Project (NCDDP) 1983 to date
- ii) Mebmer of Council of Enviromental Research
1972 to date
- iii) Member of Egyptian MAB Committee, 1972 to date
- iv) Professor of Community Medicince 1980 to date

Research experience:

- i) Effect of water quality on epidemiology
of diarrheal diseases
- ii) Health impact of draught and famine

African Environmental Experts:
E/ECA/ENV/28, December 1986.

EQUATORIAL GUINEA

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de la Sante Publique
Malabo, Equatorial Guinea

ETHIOPIA

Name and Address of Government Environmental
Co-ordination Machinery

Physical Planning Department
National Focal Point for UNEP
National Revolutionary Development
Campaign and Physical Planning Dept.
P.O. Box 1037
Addis Ababa, Ethiopia

EXPERTS:

1. Name: Yibaleh ABAY

- Institutional address:

National Water Resources Commission
Water Supply and Sewerage Authority
P. O.Box 5744
Addis Ababa, Ethiopia

- Professional qualifications:

- 1) Sanitary Science, Public Health
College, Gondar, 1970-
- ii) Sanitary Engineering, M.Sc.
Khartoum Civil Engineering
University, 1985

- Publications:

- Work Experience:

Sanitarian, Regional Co-ordinator,
Smallpox Eradication Programme, 1970-1979

- Research experience:

2. Name: Amha ESHETE

- Institutional address:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

Co-ordinator
Joint Programme for Welfare & Development
(UNICEF/FAO/CRDA/Municipality of
Addis Ababa, Red Cross)
Addis Ababa, Ethiopia

- Professional qualifications:

- a) B.Sc. in Biology
Addis Ababa University
1953 - 1957
- b) M.Sc. in Hygiene (Environmental
Health)
University of Pittsburgh (U.S.A)
1957 - 1959

- Publications:

- Work experience:

- i) Acting Chief of the Division of Environmental
Health, Ministry of Public Health
1959 - 1962
- ii) Director General, Division of Environmental
Health, Ministry of Public Health
1962 - 1970
- iii) General manager, Malaria Eradication Service,
Ministry of Public Health, 1970 - 1974
- iv) General manager, Addis Ababa Health Services,
Ministry of Public Health, 1974 - 1976
- v) Co-ordinator, Joint Programme For Welfare &
Development (UNICEF/FAO/CRDA/Municipality
of Addis Ababa, Red Cross) 1977 to date

- Research experience:

3. Name: Gabre-Emanuel TEKA

- Institutional address:

Addis Ababa University
Medical Faculty
Dept. of Community Health
P. O. Box 1176
Addis Ababa, Ethiopia

- Professional qualifications:

- a) B.Sc. in Sanitary Science and
Public Health, Oklahoma
University, 1959

- b) M.Sc. in Sanitary Science and
Public Health, Oklahoma
University, 1960

Publications:

- i) "Environmental Sanitation in Ethiopia" 1959
- ii) Environmental pollution - a major health
problem 1970
- iii) Human wastes disposal Ethiopia - A practical
approach to Environmental Health, 1984

Work experience:

- i) Instructor in Environmental Health and
Chemistry, Public Health College and
Training Centre, Gondar, Ethiopia, 1954-1957
- ii) Chief, Environmental Sanitation Department
and Assistant Dean, 1960
- iii) Assistant professor and Head of Sanitary
Science Division, 1964 -1972
- iv) Head, Planning & Programming Bureau
Ministry of Health, 1975 - 1984
- v) Associate Professor (D.C.H.)
Medical Faculty, Addis Ababa University
November 1984 to date

Research experience:

GABON

Name and Address of Government Environmental
Co-ordination Machinery

De l'Environnement et de la
Protection de la Nature
Ministere de l'Environnement et
de la protection de la nature
Libreville, Gabon

GAMBIA

Name and Address of Government Environmental
Co-ordination Machinery

- Environmental Unit,
Ministry of Water Resources and the
Environment
5 Marina Parade
Banjul, The Gambia

EXPERTS:

1. Name: Bye Mass Max Taal

- Institutional address:

19 Hill Street, Banjul, the Gambia

- Professional qualifications:

B. Sc. 1975, Dartmouth College

- Publications:

- Work Experience:

- i) 1967-1970 Science teacher at a Junior
Secondary School in the Gambia
- ii) April 1976 -Forestry Superintendent
in the Gambia
- iii) July 1978 - Assistant Conservator of Forests
- iv) November 1982 - Director of Forests in the
Gambia

- Research experience:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

GHANA

Name and Address of Government Environmental
Co-ordination Machinery

Environment Protection Council
P.O. Box M326
Accra, Ghana

EXPERTS

1. Name: Sakyi Boafo AKUFFO

- Institutional address:

Environmental Protection Council
Accra, Ghana

- Professional qualifications:

- a) B.Sc. Chemistry (Legon) 1967
- b) M.Sc. Applied Hydrobiology
(London) 1976

- Publications:

- i) Biological Assessment of Water Pollution
The development of a Biotic Index
- ii) Environmental Management and Urban
Development

- Work experience:

- i) Ghana Water & Sewerage Corporation
1967 - 1978
- ii) Environmental Protection Council
1978

- Research experience:

2. Name: DORM ADZOBUE, Clement

- Institutional address:

Department of Geography
University of Liberia
Monrovia, Liberia

- Professional qualifications:

- a) B.A. (hons) 2nd class upper 1965
- b) Ph.D. (1969)

- Publications:

- i) "The State and Industrial Development in Ghana"
Ghana Social Science Journal, Vol. No.1, 1971
- ii) "The Upsurge of Environmental Consciousness
in Africa: Timely or Belated?" Vierteljahres-
berichte: Probleme de Entwicklungslander, No.79
- iii) "Utilization of Natural Resources and Impact
on Forest and Wooded Savanna Ecosystems in
Rural Ghana" Submitted for publication in
Environmental Conservation (Ed. Polunin).
- iv) "To join or not to join the Environmental Impact
Assessment Bandwagon: Proposals for E.I.A. in
Ghana" Submitted for publication in Environ-
mental Impact Assessment Review (Ed. Packard)

- Work experience:

- i) Lecturer, University of Ghana (Geography
Department) 1969-1974
- ii) Senior Research Officer, Environmental
Protection Council of Ghana 1974 to date
- iii) Visiting Research Fellow, International
Institute for Environment and Society,
Science Center, Berlin 1979-1980

- Research experience:

3. Name: B.W. Garbrah (Dr).

- Institutional address:

Environmental Protection Council,
P. O. Box M.326,
Ministries Post Office,
Accra, Ghana.

- Professional qualifications:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- a) B.Sc. (Hon) Physics, (1953);
- b) Certificate in Biophysics and Nuclear Physics,
Moscow State University, Institute of Biophysics (1984);
- c) Ph.D. University of Strathclyde, 1967.

- Publications:

- i) "Determination of Boron by Thermal Neutron Capture"
Gamma-Ray Annalysis: "Anal. Chem: No.39, pp345-349,
(1967);
- ii) "Environmental Risk Assessment in Ghana." Paper read
at the International Seminar on Environmental Risk
Assessment, organized by SCOPE, Tihanyi, Hungary, June,
1977;
- iii) "Iron absorption and turn-over in apparently healthy
Ghanaians." Ghana Medical Journal;
- iv) "The Human Implications of Scientific and Technological
Advances: Environmental Implications." Contribution to
the symposium of the Ghana Science Association on the
Human Implications of Scientific and Technological
Advance. June, 1980.
- v) "Health and environmental problems as they relate to
irrigation and agriculture." Contribution to Ghana
Science Association's Panel Discussion, March 1981.

- Work experience:

- a) Since February, 1986, Director of Programmes,
Environmental Protection Council;
- b) 1981 - 1986: Acting Chief Executive, Environmental
Protection Council;
- c) 1977 - 1981: Scientific co-ordinator, Environmental
Protection Council;
- d) 1974 - 1977: Chief Scientific Officer, Ghana Atomic
Energy Commission;
- e) 1968 - 1974: Senior Scientific officer, Ghana Atomic
Energy Commission.

- Research experience.

In the area of nuclear physics and environmental protection.

4. Name: Emmanuel OFORI-ANYINAM

- Institutional address:

Technical Services Centre
Ministry of Works and Housing
P.O.Box M43, Accra, Ghana

- Professional qualifications:

- 1) B.Sc. Architecture - Ghana
- ii) P.G.Dip. Architecture Associate
Ghana Institute of Architects

- Publications:

- Work Experience:

- i) Akom-Nkoranza Farmers Cooperative
Housing Project (self-help) Ghana
- ii) Appropriate Technology Housing
Project - Ghana
- iii) Nima-Maamob Infrastructural Upgrading
Projects (World Bank Squatter
Upgrading Project)

- Research Experience:

- i) Production and use laterite bricks
and blocks
- ii) Production and use of clay products
in construction

5. Name: Okyeame Ampadu-Agyei.

- Institutional address:

Environmental Protection Council,
P. O. Box 326,
Accra, Ghana.

- Professional qualifications:

- a) B.Sc. Degree in Development Planning;
University of Science and Technology, Ghana, 1979;
- b) M.Sc. Econs. in Regional Development Planning,
Centre for Development Studies,
University of Wales, U.K. - 1983;
- c) Post-Graduate Certificate in Energy Planning and
Management, U.N. Institute for Development, Senegal, 1986.

- Publications:

- i) The Impact of Bushfires in Ghana, 1986;
- ii) Environmental Management in Ghana, 1985;
- iii) Poverty and energy consumption in the rural Ghana, 1986;

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- Work experience:

- i) Assistant Project Officer, Bureau d'Etudes Eman Manga, Urbanisme, Cameroon;
- ii) Assistant Lecturer, 1980-1982, Department of Planning, University of Science and Technology, Kumasi - Ghana;
- iii) Programme Officer, Environmental Protection Council, Accra, Ghana - since 1984;

- Research experience:

- i) Prospects of Biogas Utilization in Ghana - on economic assessment, 1986;
- ii) Ethnoregionalism in Ghana, 1984;
- iii) Kumasi Railway Station relocation, 1979;

GUINEA

Name and Address of Government Environmental
Co-ordination Machinery

Direction de l'Environnement,
B.P. 3118,
Conakry, Guinea-Conakry

EXPERTS:

1. Name: Mme BAH Aminatou

- Institutional address:

Universite de Conakry.

- Professional qualifications:

a) Licence de geographie, Universite de Bordeaux (1960).

- Publications:

- Work experience:

a) Professeur a l'Universite.

- Research experience:

2. Name: Abdoul Goudoussi DIALLO,

- Institutional address:

Universite de Conakry,
Conakry, Guinea.

- Professional qualifications:

a) Licence de geographie, Universite de Paris, Sorbonne,
France. (1966);

b) Certificat de Photogrammetrie, Institut de Geographie
du Japon, (1981).

- Publications: -

- Work experience:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- a) Professeur a l'Universite.
- b) Seminaire multi-regional sur l'environnement, USA, Juin - Juillet, 1978)
- c) Seminaire sur les ecosystemes et l'aménagement du territoire (Monts Nimba, fevrier - mars, 1981).

- Research experience:

GUINEA-BISSAU

Name and Address of Government Environmental
Co-ordination Machinery

Services Forestiers,
Bissau, Guinea-Bissau

KENYA

Name and Address of Government Environmental
Co-ordination Machinery

Kenya National Environment
Secretariat, Ministry of
Natural Resources and the
Environment
P. O. Box 67839
Nairobi, Kenya

EXPERTS:

1. Name: David Njoroge KINYANJUI

- Institutional address:

National Environment Secretariat
P. O. Box 67839
Nairobi

- Professional qualifications:

- a) B.A. Biology/Ecology
Lake Forest College, Illinois, U.S.A.
- b) M.E.S. (Master in Environmental
Studies) Ecology/Environmental and
Natural Resources Management

- Publications:

- i) The incidence of soil erosion in Kenya
- ii) Processes and consequences of Desertification
in Kenya
- iii) Marine and Coastal Resources of Kenya
- iv) Pesticides Use and the Kenya Environment
- v) Management of Kenya's Inlands Water Fisheries
- vi) Institutional Framework for Environmental
Management and Resource Use in Kenya

- Work Experience:

- i) 1973-1975 - Ecologist with the Ministry of
Tourism and Wildlife
- ii) 1975 - present - Senior Ecologist with the
National Environment Secretariat

- Research Experience:

2. Name : Wangari MAATHAI

- Institutional address:

The Green Belt Movement
P. O. Box 67545
Nairobi, Kenya

- Professional qualifications:

- a) B.Sc., 1964, USA
- b) M.Sc., 1965, USA
- c) Ph.D., 1971, Kenya

- Publications:

The Green Belt Movement - 1985- in Nairobi

- Work Experience:

- i) Founder, Green Belt Movement
- ii) Chairman, Environment Liaison Center, Nairobi
- iii) Work with many NGOs,
- iv) Senior Adviser to UNEP

- Research Experience:

LESOTHO

Name and Address of Government Environmental
Co-ordination Machinery

P.O. Box 92
Maseru, Lesotho

LIBERIA

Name and Address of Government Environmental
Co-ordination Machinery

Ministry of Internal Affairs
Monrovia, Liberia

EXPERTS:

1. Name: Edward Gboloco HOWARD-CLINTON

- Institutional address:

U.N. Economic Commission for Africa
P. O. Box 3005
Addis Ababa, Ethiopia

- Professional qualifications:

- a) B.Sc. Business Administration
Langston University, Langston, USA, 1969
- b) M.A. Public Administration (Organizational Development
in a Public Environment),
University of Oklahoma, USA, 1972
- c) Ph.D. Administrative Sciences,
Environmental Management,
University of Oklahoma, USA, 1978

- Publications:

- i) The Role of Tax Incentives and Disincentives as
an Administrative Tool for Environmental Management.
Ph.D. Dissertation (1978);
- ii) "Managing the African Environment": The new
Challenge for the African Public Policy-makers
- iii) "Issues of Policy"
Organization for Social Science Research in
Eastern Africa (OSSREA) Workshop, 1-3 October
(APAAM, Addis Ababa) 1984
- iv) "The Emerging Concepts of Environmental Issues
in Africa" published by Environmental Management,
an International Journal for Decision-makers
and Scientists, Vol. III, No. 3, May 1984,
Springer-Verlag, New York Inc.
- v) Developing Guidelines of National Capabilities
for Pollution Control from Basic Industries,
a technical paper presented to
the Seventh Ordinary meeting of the Committee
of Officials and Council of Ministers of the
MULPOC, Brazzaville, Congo, 20-29 February 1984

- vi) "An Overview of Environmental Management" (Education and Training) a technical staff paper presented at the Joint ECA/UNEP/ADB Workshop on the Incorporation of Environmental components into the training programmes of eleven (11) UNECA-sponsored institutions in Africa, ADB, Abidjan, Ivory Coast, 18-23 November 1985

- Work experience:

- i) Environment affairs Officer, U.N. Economic Commission for Africa Addis Ababa, Ethiopia, 1982 to date
- ii) 1978 - 1982: Management and Business development Adviser, Opportunities Industrialization Centres International (OICI), USA, to Republic of Sierra Leone;
- iii) 1975 - 1978: Environmental Co-ordinator, Oklahoma State Department of Industrial Development, and representative to the State Environmental Protection Agency;
- iv) 1972 - 1975: Assistant Director, Business Education and Entrepreneurial Training, University of Oklahoma, USA.

- Research experience:

- i) Presently participating in developing appropriate concepts for policy guidelines in environmental management from an inter-disciplinary approach;
- ii) Identification of priority areas of industrial pollution in Africa and the appropriate organizational structures for managing it in ECA member States.

LIBYA ARAB JAMAHIRYA

Name and Address of Government Environmental
Co-ordination Machinery

Department of United Nations and International
Organizations, Secretariat to the
Peoples Committee, Peoples Bureau
for Foreign Liaison
Tripoli, Libya

MADAGASCAR

Name and Address of Government Environmental
Co-ordination Machinery

Service Provincial des
Eaux et Forets
P.O. Box 50
Diego-Suarez
Antananarivo, Madagascar

EXPERTS:

1. Name: AKOTO, Rene Ronchard

- Institutional address:

Direction Generale du Plan,
P.O.Box 674, Antananarivo 101.

- Professional qualifications:

- a) Licence es Sciences Economiques, Madagascar, 1973;
- b) M.A. Economics. USA. 1979.

- Publications:

- Work experience:

- a) Participation a l'ellaboration de la strategie nationale pour la conservation de la nature;
- b) Participation a la preparation de la conference sur la conservation de la nature au Madagascar.

- Research experience:

- a) Now investigating trade-off between economic development and nature conservation in Madagascar.

2. Name: RAKOTONIRINA, CHARLES.

- Institutional address:

Service de la Meteorologie Nationale,
B.P. 1254, Antananarivo.

- Professional qualifications:

- a) Diplome Universitaire d'Etudes Technologiques, filliere Meteorologie, Universite de Madagascar, 19872;
- b) Ingeniorat, filliere Meteorologie, Universite de

Madagascar, 1980;

- c) Attestation aux Etudes Approfondies, filliere Energetique, Universite de Madagascar, 1985;
- d) Specialization: meteorologie physique
a L'Universite Libre de Bruxxelles et a l'Institut Royal Meteorologique de Belgique, Bruxxelles, 1980-1983.

- Publications:

- a) "Influence de la temperature et des precipitations sur la mortalite due aux maladies intestinales et respiratoires." 1980.

- Work experience:

- a) Service de Meteorologie Nationale de Madagascar, depuis 1979.

- Research experience:

- a) Etude de la Bioclimatoloie a Madagascar.
- b) Etude de la secheresse dans le sud de Madagascar.
- c) Etude des precipitation a Antananarivo.

MALAWI

Name and Address of Government Environmental
Co-ordination Machinery

Ministry of Agriculture
P.O. Box 30134
Lilongwe 3
Malawi

MALI

Name and Address of Government Environmental
Co-ordination Machinery

Des Eaux et Forets
B.P. 275
Bamako, Mali
Tel: 225973/225059

MAURITANIA

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de l'Amenagement Rural
Nouakchott, Mauritania

MAURITIUS

Name and Address of Government Environmental
Co-ordination Machinery

Ministry of Housing, Lands
and the Environment
Edith Cavell Street
Port Louis, Mauritius

EXPERTS:

1. Name: Dr. Michael ATCHIA

- Institutional address:

Institute of Education
Reduit, Mauritius

- Professional qualifications:

- i) B.Sc. 1961, Calcutta
- ii) B.Sc. 1963, London
- iii) M.Sc. 1972, Salford, U.K.
- iv) Ph.D. 1978, Salford, U.K.
- v) M.I.Biol. Professional, U.K.

- Publications:

- i) Environmental Education in Africa,
ACO Curriculum Series No. 2 - Book published
1982, Ibadan, Nigeria
- ii) The African Environment - from transition to
stability" The Environmentalist (1) 1981,
25-32

- Work Experience:

- i) Teacher Training (1975-1985)
- ii) Curriculum development (1975-1985)
- iii) Educational TV (1968-1985)
- iv) Writing/lecturing on environmental
themes for the public and measure groups

- Research Experience:

- i) Concepts of Environmental Education
utilization of these in curriculum
development
- ii) Development conservation in various
African countries

2. Name: Seewant EHOOJEDHUR

- Institutional address:

School of Agriculture
University of Mauritius
Reduit

- Professional qualifications:

- a) Diploma in Agriculture (Mauritius)
- b) B.Sc. Agric. (Mauritius)
- c) M.Sc. (Pedology)
- d) Ph.D. (Environmental Pollution)

- Publications:

- i) Heavy metal adsorption in soils and sediment.
Dissertation Abstracts International
Vol. 12, 1975
- ii) Heavy metal adsorption in clay minerals -

East African Soil Science Society -
Proceedings 1976

- Work Experience:

Program Officer
Environmental Training Unit
UNEP Nairobi

- Research Experience:

MOROCCO

Name and Address of Government Environmental
Co-ordination Machinery

Division de l'environnement
Ministere de l'Habitat et
l'Amenagement du Territoire
Rabat, Morocco

MOZAMBIQUE

Name and Address of Government Environmental
Co-ordination Machinery

National Directorate of Housing
Ministry of Planning
Av. Acordos de Lusaka
Maputo, Mozambique

NIGER

Name and Address of Government Environmental
Co-ordination Machinery

Ministere de l'Hydronlique et
l'Environnement
B.P. 257
Niamey, Niger
Tel: 723889

EXPERTS:

1. Name: Ousmane BOURNEIMA

- Institutional address:

Universite de Niamey,
Departement de Geologie,
B.P. 10662, Niamey.

- Professional qualifications:

- a) Doctorat de Troisième Cycle: Hydrologie, Montpellier, 1978.
- b) Doctorat d'Etat (en cours d'achèvement pour l'Université de Paris XI - ORSAY, France.

- Publications:

- a) Ousmane B. et Gruraud R. (1980): "Hydrogeologie du continent terminal en Afrique." 3eme reunion du projet IGCP-IV GS, Université de Nancy, France No. 127.
- b) "Preliminary environmental isotope survey of semi-confined aquifers in crystalline rocks from Niger sahelian zone (Liptako), in Hydrologie des zones arid, 1982.
- c) Ousmane B. et Fonte, J.Ch., (1983): "Hydrologie isotopique et hydrochimie des aquiferes discontinus de la bande sahelienne et de Air (Niger)". document presente au Colloque Internationale d'Hydrologie isotopique et de la mise en valeur des ressources en eau - AIEA.

- Work experience:

- a) Professeur de l'Hydrologie, Université de Niamey.

- Research experience:

- a) Etude sur la qualite physico-chimique des eaux souterraines destines aux besoin alimentaires et agricoles.
- b) Etude sur mecanisme de la recharge des nappes souterraines, grace a l'application des techniques isotopiques, potentialites des aquiferes discontinus du socle en zone sahelienne.

2. Name: Anada TIEGA

- Institutional address:

Direction des Forets et de la Faune,
B.P. 578, Niamey.

- Professional qualifications:

a) M.Sc. in the USA, 1980.

- Publications:

a) "Desertification in West Africa: the case of Niger."
M.Sc. Desertation, University of Arizona, USA, 1985.

- Work experience:

a) Directeur-Adjoint des Forets et de la Faune.

- Research experience:

- a) Desertification processes in Niger;
- b) Wildlife management and Agroforestry in Niger;
- c) Dune stabilization in Niger.

NIGERIA

Name and Address of Government Environmental
Co-ordination Machinery

Division of Environmental
Planning and Protection, Federal
Ministry of Housing, Urban
Development and Environment
New Secretariat
Ikoyi, Lagos, Nigeria

EXPERTS:

1. Name: Dr. Ure Anugovelem ADEKUNLE (Mrs.)

- Institutional address:

Dept. of Environmental Health
and Epidemiology
Health Science Faculty
University of Ife, Ile-Ife, Oyo State

- Professional qualifications:

- a) B.Sc. Benedict College, Columbia,
South Carolina, USA, 1975
- b) M.S.P.H., Environmental Health
University of Southern Carolina
Columbia, S.C., 1977
- c) Ph.D. Environmental Science, 1980
School of Public Health at Houston
University of Texas. Houston, Texas,
U.S.A.

- Publications:

- i) Measurement of Effects of Qubayl in Surface
Waster on Fecal Pollution Indicator. Bactering
by use of Plate Counts and Respirometry"
Water Research, Vol. 16, pp. 219-221
- ii) "Response of Bacteria to Bacterial Indicators
vs Response of Pathogenic Bacterial Species"
Water Resources Bulletin Vol. 17, No. 6
pp. 1000-1004
- iii) "Pure Culture vs Mixed Culutre Response"
Waster Resources Bulletin, Vol. 17, No. 6,
pp. 1005-1008

- Work Experience:

Lecturer I - Teaching at B.Sc. Level 1980
to Present
Dept. of Environmental Health & Epidemiology

African Environmental Experts:
E/ECA/ENV/38, December 1986.

Health Sciences Faculty
University of Ife

- Research experience:

- i) Water Pollution Control by Studying Indicators of Water Pollution
- ii) Water Quality Control, Protecting Water Sources from Pollution and Monitoring the Quality (Bacterial)
- iii) Provision of water for rural communities by harnessing and storing rain water making & available to the community on a year-round basis

2. Name: James Oladipo ADEJUWON

- Institutional address:

University of Ife
Ile-Ife, Nigeria

- Professional qualifications:

- a) B.Sc. (Hons) London, 1960
- b) M.Sc. (London) 1963
- c) Ph.D. (London) 1968

- Publications:

- i) "Human Impact on African Environmental Systems" Chapter 10 Contemporary Africa . Ed. by G.C. Knight & J.D. Newman, Prentice Hall, pp.140-158
- ii) "Environmental degradation in Savanna derivation" Perspectives in Landscape Ecology (Eds. S.P. Tjallingii and A.A. de Veer) C.A.P.D Wageningen pp. 237-244
- iii) "Designing a model Rural Energy System for Nigeri" UNEP/Integrated Rural Energy Planning: Dr. Y. El Mahgary and Dr. A.K. Biswas, Chapter 7

- Work experience:

- i) Visiting Assistant Professor
University of Kansas, Lawrence, U.S.A, 1970
- ii) Visiting Associate Professor
Penn. State University, State Coll.
Penn. U.S.A. 1975

- iii) Institutional Coordinator United Nations University, Tokyo, Japan
- iv) University of Ife, in charge of Rural Energy Systems Research Project, October 1982 to date

- Research experience:

- i) Models for River Basin Management
- ii) Environmental impact of oil production
- iii) Soil changes under bush fallows
- iv) Wood productivity of bush fallows
- v) Soil changes under cocoa

3. Name: Dr. Olu Adeyemi.

- Institutional address:

Department of Microbiology,
University of Ife,
Ile-Ife, Nigeria.

- Professional qualifications:

- a) B.Sc. 1970. University of Ibadan. Nigeria
- b) M.Sc. 1973. Cornell University, Ithaca, New York, USA;
- c) Ph.D. 1976, Cornell University, Ithaca, New York, USA;

- Publications:

- i) Persistence of arasan (pesticide) in aquatic ecosystems in Nigeria. Progress in Water Technology Vol. 11, pp. 95-102(1979);
- ii) Biogas from Eupatorium odoratum alternative cheap energy source for Nigeria. Global Impacts of Applied Microbiology Vol. 6 pp. 245-52(1981);
- iii) Stability of brestan (pesticide) in tropical waters. Waster Science and Technology Vol. 14. pp. 133-142 (1982);

- Work experience:

- i) Sept. - Dec. 1976 International Institute of Tropical Agriculture (IITA) Ibadan, Nigeria - as a UNEP soil microbiologist;
- ii) 1977 to date, University of Ife, Nigeria as an Assistance & later Associate Professor of Environmental Microbiology

- Research experience:

- i) Bacteriological and chemical quality of drinking water (Water pollution studies);
- ii) Cytotoxicity and biotransformation of pesticides;
- iii) Use of garbage and manure for biogas production;

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- (renewable energy);
iv) Petroleum pollution studies;

4. Name: Dr. Andrew O. AGANGA

- Institutional address:

Department of Vet. Public Health and
Preventive Medicine
Ahmadu Bello University, Zaria
Nigeria

- Professional qualifications:

- a) DVM 1977 Ahmadu Bello University
Zaria. Nigeria
- b) M.Sc. 1981 Ahmadu Bello University
Zaria, Nigeria
- c) F.R.S.H. 1982 Royal Society of
Health (London)
- d) M.I.l Env. Sc. 1984 Institution
of Environmental Sciences, London

- Publications:

- i) Public Health significance of industrial
pollution in Zaria. Nigeria. Royal Society
of Health - Journal Vol. 105(4) Aug. 1985
(in press)
- ii) Epidemiology of Road Traffic Accident in
Zaria, Nigeria. Royal Society of Health
Journal Vol. 103(4) 123-126, 1983
- iii) Meat Hygiene Practices in Nigeria - Problems
and Prospects. Nigerian Livestock Farmers
Journal Vol. 4(1): 9-10 1984

- Work Experience:

- i) Teaching of Environmental Health to
Veterinary Students - Ahmadu Bello
University, Zaria, 1978-85
- ii) Research into Industrial Pollution in
Zaria, 1983

- Research Experience:

Assessment of Chemical Pollutants from
Industries and Fertilizer Usage
(Present Plan of Study)

5. Name: Dr. A.M. Ahmed.

- Institutional address:

Health Services Department,
University of Sokoto,
P.M.B. 2346,
Sokoto.

- Professional qualifications:

a) M.B.B.S. 1978,
Ahmadu Bello University,
Zaria;

- Publications:

- Work experience:

- i) Medical Officer, General Hospital Sokoto, 1979-1981;
- ii) Senior Medical Officer, Murtala Mohammed Hospital Kano, 1981-1982;
- iii) Ag. Director, Health Services Dept., University of Sokoto, 1984-1985;

- Research experience:

- i) Effects of mothers education on child health;

6. Name: Funso Alaba Akeredolu (Dr.).

- Institutional address:

Dept. of Chemical Engineering,
University of Ife,
Ile-Ife, Nigeria.

- Professional qualifications:

- a) B.Sc. (Hons) Chemical Engineering, University of Ife, Ile-Ife,
- b) M.Sc. Plant & Process Design, 1978, University of Strathclyde, Glasgow;
- c) Ph.D. Chemical Engineering 1981, University of Strathclyde, Glasgow;

- Publications:

- i) Performance of a Sieve-Plate Column for Particle Scrubbing Filteration and Separation 20(2), 128-133;
- ii) "Maximizing the Performance of a Multiple-Stage Variable-Throat Venturi Scrubber for Particle Collection", Atoms. Environ. 17(11), 2173-2179;

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- iii) "The Nigerian Industry, the Environment and the Chemical Engineer" 12th Annual NSCHE Conf., Lagos, Nov. 14-16;

- Work experience:

- i) Doctoral Research on Venturi Scrubberr Design 1978 to 1981
- ii) Ambient Air Monitoring for Ile-Ife 1983 to 1985;
- iii) Toxicity/Effectiveness testing for Oil Dispersants; 1983 to 1985;

- Research experience:

- i) Air Pollution: Collection of baseline data for Ile-Ife;
- ii) Water Pollution: investigations on toxicity/effectiveness; of some commercial oil spill dispersants

7. Name: Ekundayo Timothy AJIBADE

- Institutional address:

College of Agriculture
Ahmadu Bello University
Kabba

- Professional qualifications:

- a) B.Sc. Hons (Agri) ABU, 1970
- b) P.G.D.E. (ABU) 1973
- c) M.Sc. (Agri) Frensco Calif. 1981

- Publications:

- Work experience:

Ahmadu Bello University

- Research experience:

November 1979 and March 1981;

8. Name: Dr. Dunstan Akanni Adewale Akintonwa.

- Institutional address:

Department of Biochemistry,
College of Medical Sciences,
University of Calabar,
Calabar. Nigeria.

- Professional qualifications:

- a) B.Sc. (Special Hons) Chemistry (1968);
- b) A.I.M.L.S. (Chemical Pathology) 1960;
- c) Ph.D. (Biology) 1977.

- Publications:

- i) The metabolism of 2-chloro-s-(2,4 dichlorophenyl) vinyl 2 diethyl 2 phosphate (chlorfenvinphos) in the dog and rat. Biochem. J. 102, 133-142 (1967);
- ii) Studies on the interactions of dieldrin with mammalian liver cells at the subcellular level. Ecoforicology and Environmental Safety 1, 7-16 (1977);
- iii) A new concept in the relationship between biochemical reaction mechanism and molecular basis of agranulocytosis. Biochem Med. 32, 151-150 (1984);

- Work experience:

- i) Government Chemist (1949-1956);
- ii) Shell Toxicology Laboratory, Sittingbourne, Kent (1963-1978);
- iii) Department of Biochemistry, University of Calabar (1978 to date).

- Research experience:

- i) Chemical carcinogens and the endoplasmic reticulum (1977-77);
- ii) Metabolism of foreign compounds (1963-67) synthesis of optically active phosphorothionates and biocides (1967-72);
- iii) Mechanistic biochemistry and toxicology (1977 to present);

9. Name: A. B. ANASO

- Institutional address:

College of Agriculture
Ahmadu Bello University
Kaduna, Kwara State, Nigeria

- Professional qualifications:

- a) B.Sc. (Zoology/Botany)
University of Nigeria, 1974
- b) M.Sc. (Crop Protection)
Ahmadu Bello University, 1980

- Publications:

Pollution in Agriculture, West African Farming
and Food Processing. January/February 1981
pp. 25 & 47

- Work experience:

Generally interested in pollution aspects
of agricultural practices, 1979 to date

- Research experience:

Identification of areas of agricultural
practices causing pollution in Nigeria

10. Name: Dr. E.A. ARINZE

- Institutional address:

Dept. of Agricultural Engineering
Ahmadu Bello University
Zaria, Nigeria

- Professional qualifications:

- a) B.S.C. (Agric. Engineering) 1973
.Sc.
Univ. of Nigeria, Nsukka
- b) M.Sc. (Engineering) 1978
Univ. of Saskatchewan, Saskatoon
Canada
- c) Ph.D. (Engineering), 1981
Univ. of Saskatchewan. Saskatoon
Canada

- Publications:

- i) Simulation and experimental evaluation of a
solar assisted energy conserving. Greenhouse
Ph.D. Thesis, University of Saskatchewan,
Saskatoon, Canada
- ii) A dynamic thermal performance simulation
model of an energy conserving greenhouse
with thermal storage, Transactions of the

- ASAE, Vol. 27, No. 2, pp.508-519
iii) Energy availability and precision in
Northern Nigeria, Solar Energy Journal,
Vol. 1. No. 4

- Work experience:

- i) University of Saskatchewan,
Saskatoon,
Canada. 1978-1981
ii) Ahmadu Bello University, Zaria, Nigeria,
1981 to date

- Research experience:

11. Name: Prof. S. Ola Daniel.

- Institutional address:

College of Health Sciences,
University of Sokoto,
P.M.B. 2254,
Sokoto. Nigeria, W.A..

- Professional qualifications:

- a) M.B.Ch.B. (Glas.) (1963).
a) M.B.Ch.B. (Glas.) (1963) D.P.H. (Glas.) (1966)
b) F.F.C.M. (U.K.);
b) F.F.C.M. (U.K.)
c) F.M.C.P.H. (Nig.) (1976);
d) F.W.A.C.P. (West Africa) (1978);
e) Diploma in Epidemiology (CDC, USA) (1970);

- Publications:

- i) Public health aspects of housing in Nigeria: observations
on the human factors in refuse disposal in Lagos. J.R. Inst.
Phil & Hyg. - health & Hygiene, Vol. 1, No. 3, 1977,
pp. 153-158;
ii) Waste disposal -what are the problems in developing
countries? Journal of the Royal Society of Health, Vol.99,
No. 2, 1979, pp. 75-78 &81;
iii) An epidemiology of physical conditions of destitutes
(beggars) in Lagos. J. Trop. Med. and Hyg. 81, 1978,
pp. 80-83;

- Work experience:

- i) Public Health Dept., Lagos City
i) Public Health Dept., Lagos City Council, 1967 to 1970

- ii) University of Lagos 1970 - 1981;
- iii) University of Sokoto, 1981 to present.

- Research experience:

- i) Refuse disposal in an urban city;
- ii) Environmental health in a developing country;
- iii) Public health aspects of housing in Nigeria;

12. Name: Ravindra Deshmukh

- Institutional address:

Dept. of Architecture;
Faculty of Environmental Design & Management;
University of Ife, Ile-Ife. Nigeria.

- Professional qualifications:

- a) B.Arch. (Degree) 1971 at Nagpur University, India;
- b) M.Arch. (Degree) 1975 at University of Roorkee, India;

- Publications:

- i) "Design of Sugar Factory - A physical aspect", A Trade Journal. Jan/Feb 1975, Bombay, India;
- ii) "Protecting Factory Premises", African Technical Review, London, March 1984;
- iii) "Towards Appropriate Housing for Rural Dwellers of Southern Sahara", proceedings of International conference on low-cost housing for developing countries, March 1985, pp.725-34;

- Work experience:

- i) Central Building Research Institute, India, 1974 to 1975;
- ii) Construction Dept. BHEL, India 1974 to 1975;
- iii) University of Ife, Nigeria, 1982 to date.

- Research experience:

- i) Did construction work related to nonconventional energy sources, established a biogas plant, etc. in India;
- ii) Economic appraisal of shanty towns off Lagos, Nigeria;
- iii) Housing for rural Nigeria;

13. Name: James Kolawole EGUNJOBI

- Institutional address:

Department of Agricultural Biology
Faculty of Agriculture & Forestry
University of Ibadan
Ibadan, Nigeria

- Professional qualifications:

- a) B.Sc. (special honours) Botany
London, 1962
- b) Ph.D. (Botany) Ecology.
Wellington 1967

- Publications:

- i) The common weeds of Western Nigeria. A bulletin of the Research Division of the Ministry of Agriculture and Natural Resources, pp.35 + 32 figures
- ii) West African weeds. Oxford University Press, Ibadan. PP. 230 + 150 figures
- iii) Oil pollution in the Rivers State of Nigeria: A case study of Dere Area. Proc. COSTED/CTS/ workshop on environmental resource management. Ghana. 1975

14. Name: EGUNJOBI, Timothy Olayiwola.

- Institutional address:

Centre for Urban and Regional Planning,
University of Ibadan,
Ibadan, Nigeria.

- Professional qualifications:

- B.Sc.(Hon) Geography - Minor in Economics and Sociology, University of Ibadan (1971);
- M.A.(Town/Regional Planning), University of Nottingham (1975);
- Ph.D.(Town/Regional Planning), University of Nottingham (1977).

- Publications:

- 1. Perceptions of Urban Environmental Problems: A Pilot Study Centred on the City of Ibadan:, a NISER Research Project Report, (1983);

2. "Policy and Planning for water supply in Nigeria: The Example of Oyo North Division", Proceedings of the WEDC International Conference, Planning for water and waste in hot countries, ed. John Pickfors, Loughborough University of Technology, pp 69 - 80.
3. "Factors influencing Choice of Hospitals: A Case Study of the Northern part of Oyo State, Nigeria," in Social Science and Medicine: An International Journal: Social issues on the Medical Geography of Africa, Vol. 17, No.9, (1983) pp.585 - 589;
4. "Utopia in Planning:" Elements of Town and Country Planning, ed. Adepouju. G. O. (1985);
5. "Urban Environmental Noise Pollution in Nigeria" in Environmental Issues and Management in Nigerian Development, ed. P.O. Sada and F.O. Odemerho, Chapt. 10 (1986).

- Work experience:

- Research Fellow II, NISER, Ibadan (1978 - 80);
- External Examiner, The Polytechnic, Ibadan (1984 to date);
- Research Fellow I, NISER, Ibadan (1980 to February 1985);
- Senior Lecturer, University of Ibadan (March 1985 to date)
- External Examiner, Faculty of Environmental Design and Management, University of Ife, Ile-Ife, (1985 to date);

- Research experience:

- A lot of research work in the area of town and country planning in Nigeria since 1976;

15. Name: Professor Ulo Kponuko ENYENIHI

- Institutional address:

Director
Institute of Oceanography
University of Calabar
P.M.B. 1115
Calabar, Nigeria

- Professional qualifications:

- i) B.Sc. Special Hons. Zoology,
London, 1962
- ii) Ph. D. Parasitology, Ibadan, 1966

- Publications:

- i) Waste Water Treatment in the Oil Refinery Industry in Nigeria. Invited paper presented at the UNEP/BMFT International Symposium on Waste Water Technology for Developing Countries, Karlsruhe, West Germany 18-8 November, 1980
- ii) U.K. Enyenihi (1980) Foodborne Infections in the Cross River State of Nigeria. Proceedings of the First International Congress of Foodborne Infections and Intoxications, Berlin (West) 1980 pages 258-264

- Work Experience:

- i) Lecturer/Snr. Lecturer, University of Ibadan, 1966-1973
- ii) Senior Lecturer, University of Nigeria Calabar Campus, 1973-1975
- iii) Professor, University of Calabar, 1975-1985

- Research Experience:

- i) Waste Water disposal from Nigerian Oil Refineries, 1979-1981
- ii) Oil Pollution in the Marine Environment of the Cross River State of Nigeria. 1980-1985
- iii) Ecological Studies of the Mangrove Swamp Forest of the Cross River State of Nigeria - 1985
- iv) Food Contamination and Toxicity. U.K. Enyenihi (1980)

16. Name: Drt. W. O. ERHUN

- Institutional address: •

Dept. of Pharmacognosy
University of Ife
Ile-Ife

- Professional qualifications:

- a) B. Pharm (Hons) (Ife) 1978
- b) M.Sc (Ife) 1980
- c) Ph.D. (Ife)

- Publications:

- Work Experience:

University of Ife from July 1980 to date

- Research Experience:

Cultivation of the firewood plant-
Balanites negyptiaca del.

17. Name: Dr. E.S. Essien.

- Institutional address:

Department of Community Medicine,
Faculty of Medicine,
Ahmadu Bello University,
Zaria.

- Professional qualifications:

- a) B.Sc. (Micro/Env. Hlth) 1972, San. Jose Univ. San Jose, Calif., USA.
- b) Dip. V.B.DC. (Vet Borne Disease) 1973, Centre for Disease Control, Atlanta. Georgia, USA.
- c) R.S. (Env. Hlth) 1973, Calif. State Dept. of Pub. Hlth., Calif. USA.
- d) M.A. (Nat. Science) 1974, San Jose State Univ. San Jose, Calif., USA.
- e) Ph.D. (Com Med) 1982 Ahmadu Bello University, Zaria. Nigeria.

- Publications:

- 1) Urbanization and its effects on Env. Sanitation. J. of Public Health. London. No. 92. pp. 69-75. 1978,
- 11) Rural water quality control measures: Experience in Northern Nigeria, J. of Public Hlth. London, Vol. 93< No. 6. pp. 363-370, 1979;

- 111) The incidence of Gastroenteritis among children (0-10 yrs), in Malumfashi, North Nigeria. A chapter on a book, Children in Kaduna State, Nigeria: Problems and Needs, ABU Bookshop pp. 115-133, 1981;

18. Name: Dr. Martin IGBOZURIKE

- Institutional address:

Department of Sociology
Ahmadu Bello University
Zaria

- Professional qualifications:

- a) B.Sc. Sociology, Ibadan, 1967
- b) Ph.D. Sociology. Uppsala, 1976

- Publications:

- 1) Problem generating structure in Nigeria's Rural Development. Scandinavian Institute of African Studies, Uppsala, 1976
- 11) The Social and Cultural Factors in Nigeria's Food Production and Marketing, UNESCO, 1983
- 111) The Goronyo Dam - A study in pre-impoundment KLRI 1984

- Work Experience:

Teaching Development Sociology and Rural Development since 1976

- Research Experience:

Research in Agricultural and Rural Development since 1971

19. Name: Dr. Augusdtine O. Isichei.

Institutional address:

Botany Department
University of Ife,
Ile-Ife, Nigeria .

- Professional qualifications:

- a) B.Sc. (Ife) 1974 in Botany,
- b) Ph.D. (Ecology) (Ife) 1979,

- Publications:

- i) The effects of Waste gas flares on vegetation in South-Eastern Nigeria. J. Appl. Ecol. 13, 177-187 (with W.W. Sanford) (1976);
- ii) Nitrogen fixation by blue-green algae soil crusts in Nigerian Savanna. In Nitrogen cycling in West African ecosystems pp. 191-198. T. Rosswall ed. SCOPE Int. Nitrogen Unit, Stockholm (1980);
- iii) Role of Cyanobacteria and algae in arid lands. In Soil Microbiology and organic matter in soil rehabilitation. Proceedings of the UNEP/ISEB Workshop on the Uses of Microbiological process for Desertification Control. Aluquerque, NM, USA, 1983;

- Work Experience:

- i) Nutrient cycling in the savanna ecosystem;
- ii) Production in the Savanna ecosystem;

- Research experience:

- i) How best to utilize the savanna. Investigating plants useful for nitrogen conservation in the savanna

20. Name: Kenneth Ogugua IWUGO

- Institutional address:

Department of Civil Engineering
University of Lagos
Nigeria, West Africa

- Professional qualifications:

- a) B.Sc. (hons) Chemical Technology
Huddersfield Polytechnic, Queens-
gate, Huddersfield, Yorkshire,
U.K., 1965-1969
- b) M.Sc. Advanced Analytical Chemistry
University of Bristol, England
(1969-1970)
- c) Ph.D. Civil Engineering (Public
Health Engineering) University
of Birmingham, England (1975-1977)

- Publications:

- i) "The present status of the water pollution problems in the Kafue township area", Zambia Journal of Science and Technology 1, 12-28, (1976)
- ii) "A study of the mixing characteristics of sewage stabilization ponds with radio-active tracers" J. Inst. Public Health Engineers, 4, 138-142, (1976)
- iii) "Factors affecting the implementation of improved sanitation in Africa", Rouyal Society of Health Journal, 99, 28-30, (1979)

- Work experience:

- i) Mersey and Weaver River Authority, Warrington, England, Senior Water Technologist, 1970-1972
- ii) National Council for Scientific Research, Lusaka, Zambia; Principal Professional Officer, 1972-1975
- iii) Lecturer in Environmental Health Engineering Department of Civil Engineering, Ahmadu Bello University, Zaria, 1978-1979
- iv) Senior lecturer in Public Health Engineering Department of Civil Engineering, University of Lagos, 1979 to date

- Research experience:

- i) Low-cost excreta disposal facilities and intestinal parasitism in Africa
- ii) Collation of performance data of large-scale waste stabilization ponds in Africa
- iii) Sullage disposal systems in Africa
- iv) Excreta reuse in Africa
- v) Design of communal sanitation facilities in Africa

21. Name: Professor L. K. Jeje.

- Institutional address:

Department of Geography,
University of Ife,
Ile-Ife, Nigeria.

- Professional qualifications:

- a) B.A. - Ibadan, 1966;
- b) Ph.D. - Edinburgh, 1970;

- Publications:

- i) Preliminary investigation into problems of soil erosion in Ekito-Uesa Area Geo-Eco-Prop 1(1):175-186, 1978;
- ii) Some soil erosinty factors and sediment field in the University of Ife, Ile-Ife Nigerian Geographical Journal; 20(1) 19-69, 1977;
- iii) Runoff and soil loss from erosion plots in Ife area of Southern Nigeria Geo-Eco-Prop 6(3) 161-181, 1982;

- Work experience:

- i) Lecturer in Physical Geography 1970 to now;
- ii) Various work on soils for Drainage Basin Authorities.
- iii) Land use Evaluation for Drainage Basin Authorities;

- Research experience:

- i) Sediment yield from river basins with the aim to study erosion problems;
- ii) soil ersoion on slopes with the aim to recommend cp, batove ,easies
- iii) combative measures.
- iv) Soil evaluation and mapping with the aim to carry out soil suitability assessment;

22. Name: Mercy Jummai.

- Institutional address:

Centre for Social and Economic Research,
Ahmadu Bello University,
Zaria, Nigeria.

- Professional qualifications:

- a) B.Sc. (Sociology) 1975;
- a) B.Sc. (Sociology) 1975. Ahmadu Bello University, Zaria,
- b) M.Sc. (Urban and Regional Planning) Ahmadu Bello University, 1980;

- Publications:

- Work experience:

- Research experience:

- i) Rural Housing Perception among the Gwan of Nigeria;

23. Name: Dr. M.S. KALLAH

- Institutional address:

Nat. Animal Prod. Research Institute
Ahmadu Bello University
P.M.B. 1096
Samaru, Zaria, Nigeria

- Professional qualifications:

- a) B.Sc. 1970, N. Mexico
- b) M.Sc. 1973, Texas A&M., U.S.A.
- c) Ph.D. 1980, Col. State Univ. USA

- Publications:

- i) Lecturer - Range Management 1971, 1974-1977
- ii) Research Associate, Col. State University
1977-80
- iii) Senior Research Fellow/Program Leader,
1981 to date

- Work experience:

- i) Lecturer - Range management 1971, 1974-77
- ii) Research Associate, Col. State University
1977-80
- iii) Senior Research Fellow/program Leader,
1981 to date

- Research experience:

Training middle cadre extension staff
on range management & settlement of
pastoralists

24. Name: Dr. E.K. Mensah.

- Institutional address:

Technology Planning and Development Unit,
Faculty of Technology, University of Ife,
Ile-Ife, Nigeria.

- Professional qualifications:

- a) B.Sc. (Legon. Ghana) 1974, Ag. Economics;
- b) M.Phil (Ibadan, Nig.) 1977 Ag. Economics;

- c) Ph.D. (Ames, Iowa, USA) 1980, Economics;
- d) Post Doc. (Univ. of Chicago USA) 1980-1982
Energy & Environmental Policy Modelling.

- Publications:

- i) Effects of Improvements in Visibility on Traffic Accidents in Cook and Dupage Countries. August 1981. In Establishing and Valuing the Effects of Improved Visibility in Eastern United States; by Committee on Public Policy Studies, Univ. of Chicago, 1981;
- ii) Visibility, Pollution, Accidents and the Value of Life. Workshop in Resource Economics, Univ. of Chicago, Department of Economics, Nov. 1983;

- Work experience:

- Research experience:

- i) Establishing and Valuing the Effects of Improvements in Environmental Visibility in Eastern USA, USEPA contract to Univ. of Chicago;

25. Name: Adamu Nayaya MOHAMMED

- Institutional address:

Vice-Chancellor
University of Calabar
P.M.B. 1115
Calabar

- Professional qualifications:

- a) B.Sc. Zoology and Botany
B.Sc. (Zoology & chemistry)
University College Ibadan 1958-1963
- b) Diploma in Applied Parasitology and Entomology (D.A.P & E.) (= M.Sc. Medical Parasitology)
London School of Hygiene and Tropical Medicine, 1964-1965
- c) Institute of Tropical and Protozoan Diseases, Faculty of Veterinary Medicine, University of Utrecht, the Netherlands, 1971-1973; study fellowship; working on ticks and tick-borne diseases
- d) Ph.D 1974
Faculty of Veterinary Medicine
Ahmadu Bello University. Zaria

- Publications:

- i) Veterinary Entomology pp 1-140 (unpublished yet)
- ii) In Tick-borne Diseases and their Vectors.
CTUM, Edinburgh, 1976
- iii) Nomadic Herders pp. 233-236.
In: Research and Public Policy in Nigeria.
ABU, Zaria, 1976

- Work experience:

- i) Veterinary Assistant, Min. of Animal and
Forest Resources, Northern Nigeria,
1955-1962
- ii) External Affairs Officer, Min. of External
Affairs, Lagos and London, 1963-1964
- iii) Research Entomologist, Tsetse and Trypano-
somiasis Division of the Ministry of Animal
and Forest Resources, 1964-1966
- iv) Ahmadu Bello University
1966 to-date
- v) Vice-Chancellor
University of Calabar
October 1981 to date

- Research experience:

- i) Glossina, ticks and tick-borne diseases
and all other arthropod vectors of diseases
of veterinary and medical importance
- ii) Incidence and biological characterization
of ticks of livestock
- iii) Identification of Theileria mutans in
Amblyomma variegatum and of Babesia spp
in Boophilus ticks
- iv) Evaluation of the efficacy of ixodicides
on cattle under field conditions
- v) Studies on the biology of irradiated
laboratory reared Glossina palpalis
with special reference to their ability
to cause trypanosome infections in cattle.

Research contact entered into between me
and the International Atomic Energy
Agency, Vienna - Austria - December 1979

26. Name: E.J. OBAYORI

- Institutional address:

College of Agriculture
Division of Agricultural Colleges
Ahmadu Bello University
Kabba, Kwara State, Nigeria

- Professional qualifications:

B.Sc. Horticulture, Calpoly,
Pomona, USA, 1979

- Publications:

- Work experience:

College of Agriculture
Kabba, 1979-1985

- Research experience:

27. Name: Innocent Chuka Ogwude.

- Institutional address:

Centre for Social and Economic Research,
Ahmadu Bello University,
Zaria, Nigeria.

- Professional qualifications:

- a) B.Sc. Economics, (1974), Ibadan;
- b) Diploma of the Imperial College (DIC) in Civil Engineering: Transport, February 1979, London;
- c) M.Sc. (Engineering) Transport, March 1979, London;
- d) Ph.D. Candidate in Transport Economics: Ibadan. University.

- Publications:

- i) The Impact of a New road Construction: A study of the Wukari/Numan Road in Gongola State. C.S.E.R. Research Report No. 10, Ahmadu Bello University, Zaria, (January) 180 pp.;
- ii) Human constraints on national transport development to be presented at the session on Transport and the Environment in the Conference on Human Behaviour and the Challenges of National Development, University of Ife, Nigeria, 15-19 April 1985;

- Work experience:

- Research experience:

- i) Environmental Impact of a new road on the neighbouring rural communities in Gongola State of Nigeria between

28. Name: Dr. Julius I. Olaifa.

- Institutional address:

Department of Plant Science,
University of Ife,
Ile-Ife, Nigeria.

- Professional qualifications:

- a) B. Sc. Agriculture, 1975, University of Ife, Nigeria;
- b) M.S. Entomology, 1981, Michigan State University, USA;
- c) M.Phil, Entomology, 1979, University of Ife, Nigeria;
- d) Ph.D. Pesticide
- d) Ph.D. Pesticide Toxicology, 1984, Michigan State Univ. USA

- Publications:

- Work experience:

- i) Research Assistant, Michigan State University, 1982/83;
- ii) Lecturer & Researcher, University of Ife, 1985;

- Research experience:

- i) 1981 monitoring kepone and mirex residue in fishes in White Lake, Michigan, U.S.A.;
- ii) 1982/83 Transformation of TCDD degradation capability to bacillus megaterium using bacillus subtilis as plasmid donor;
- iii) 1985 presently analysing residue of selected insecticides in food commodities in Nigeria;

29. Name: Olasupo Adebayo OLOYEDE

- Institutional address:

Urban & Regional Planning
Faculty of Environmental Design
Ahmadu Bello University
Zaria, Nigeria

- Professional qualifications:

- a) B. Arch. 1977 USA
- b) M.Sc. Transport Eng. Plan. 1980
USA
- c) M.P.A. Planning 1982, USA

- Publications:

- Work experience:

Dept. of Ecology, State of Washington
USA, June 1979 to Sept. 1979
CH2M Hill Firm, Bellevue, Washington, U.S.A.
1980-1981

- Research experience:

- i) Enviromental impact assessment 1979
Human Settlement Problems & Conserv.
Natural Resources
- ii) Environmental impact assesment 1981
Transportation (water, air and land
pollution

30. Name: Dr. Samuel P.A. Okoro.

- Institutional address:

University of Sokoto,
Dept. of Forestry and Fisheries,
P.M.B. 2346, Sokoto.

- Professional qualifications:

- a) B.Sc. (FOR) Ibadan, 1969;
- b) M.Sc. Mich. State, 1975;
- c) Ph.D. Minnesota, 1980;

- Publications:

- i) Wind shelter in Sokoto state: An overview seminar paper
at the University of Sokoto 1983
- ii) The problems of "Seasonal Deser" conditions in the Sudan
Savanna zone of Sokoto state. Wjhat they mean and how to
overcome them. paper presented to 13th annual Confernce of
Forestry Associatgion of Nigeria, 1983;

- iii) Commercial fuelwood cutting in Sokoto paper presented to the 14th annual conference of forestry association of Nigeria, 1984;

- Work experience:

- i) Bendel State Nigeria 1970-1975;
- ii) 4-F Organisation Michigan 1974-1975;
- iii) Sokoto, 1981 to date.

- Research experience:

- i) Fuelwood energy option, University of Sokoto, Energy Research Unit, Project No. 53 (ongoing);
- ii) Ecological implications of fuelwood cutting in the fringes of the sahel zone;

31. Name: Dr. D. O. ONI.

- Institutional address:

College of Agriculture,
Ahmadu Bello University,
Kabba,

- Professional qualifications:

- a) B.Sc. Agriculture, ABU - Zaria, June 1970;
- b) M.Sc. Agri. Edu. KSU, USA, May 1974;
- c) Ph.D. Agri. Ext. Edu., KSU, USA, May 1983;

- Publications:

- i) Mass food production and what next - Nigeria Herald, 1984
- ii) Radio Broadcasting as an Effective Medium for Agri. Extension, AERLS Newsletter, Vol. 10, No.2, Nov 1984; pp. 25-31

- Work experience:

- i) 1970 to date Teaching Administration, Kabba;

- Research experience:

- i) Effectiveness of selected extension teaching methods and information on adoption of new farming practices by farmers in Kabba State;
- ii) Radio Broadcasting as an Effective Medium for Agri. Extension;
- iii) Use of local leaders in extension.

32. Name: Reynaldo G. PALIS

- Institutional address:

College of Agriculture
Ahmadu Bello University
Kabba, Kware State

- Professional qualifications:

- a) B.Sc. in Agriculture
Univ. of the Phillippines 1968
- b) M.Sc. in Soil Science
Univ. of the Philolippines 1977

- Publications:

Grasses and legumes in soil conservation
Soil Technical Bulletin No. 3,. 1981, Bureau
of Soils, Min. of Agriculture, Phillippines

- Work experience:

- i) Researches on soil conservation and
Management
- ii) Man & Biosphere Porject on Soil Erosion
Control, Phillippines, 1977 to 1985

- Research experience:

Researches on soil conservation
particularly on soil erosion control
watershed management

33. Name: A.K. Keku Philip.

Institutional address:

College of Agriculture,
Ahmadu Bello University,
Kabba, Kwara State,
Nigeria.

- Professional qualifications:

- a) B.Sc. Zoology, 1975 (Ibadan);
- b) M.Sc. Agri. Biology, 1980 (Ibadan);

- Publications:

1)

- Work experience:

1) Nigerian Institute for Tropical Research, Kaduna;

- Research experience:

34. Name: Egbenya Usah Shaibu-Imodagbe.

- Institutional address:

Ahmadu Bello University,
College of Agriculture,
Bakura,
P.M.B. 2285,
Sokoto, Nigeria.

- Professional qualifications:

- a) B.Sc. (Hons) Agriculture with specialisation in Soil Science, 1978, The University of Ibadan, Ibadan, Nigeria;
- b) M.Sc. Pollution and Environmental Control, 1985; Pollution Research Unit, The University of Manchester, Manchester M13 9PL, England;

- Publications:

- i) Environmental Impact Assessment and its application to a development project (pulp and paper mill) in the Cross River State of Nigeria, M.Sc. Thesis 1985;
- ii) Variation of soil physico-chemical properties with different levels of agricultural utilisation
- iii) Toposequence forms and distribution of sesquioxides, zinc and copper in the Gwagwa plains of the new Federal Capital Territory of Nigeria;

- Work experience:

- 1) Experience in soil and water management, waster quality assessment since 1978. Of late (from 1981) interest has generated in control of envirommental pollution including that which is agricultural induced.

- Research experience:

- 1) Pollution of lake Natu by various agricultural practices in Bakura area including the Bakolori Irrigation Project

35. Name: Dr. J. O. Sonuga.

- Institutional address:

ENPLAN GROUP,
P. O. Box 4177,
Lagos, Nigeria.

- Professional qualifications:

- a) B.Sc. (Eng.) 1960, University of London;
- b) Ph.D., 1963, King's College, London;
- c) MICE, 1963, London;
- d) FICE, 1975, London;
- e) MASCE, 1964, USA; FASCE, 1976, USA;

- Publications:

- i) Hydrological aspects of the drought event in Nigeria 1972/73; Hydrological sciences bulletin, Vol. 22, No. 4, December 1977;
- ii) Entropy principle applied to the rainfall-runoff process. Journal of Hydrology, Vol. 30, 1/2 May;
- iii) Humamn activity as a course of shoreline retreat. An example of Victoria Beach, Lagos. Lagos Notes of Records, UNILAG, Vol. III, No. 2, Jan. 1972;

- Work experience:

- i) University of Lagos, 1964-1976;
- ii) ENPLAN GROUP, 1976 todate;

- Research experience:

- i) Hydrology and drought;
- ii) Soil erosion, land reclamation, dam structures;
- iii) Computer application and water resources engineering; problems

36. Engr. Bello A. Suleiman.

- Institutional address:

University of Sokoto,
P.M.B. 2346,
Sokoto, Nigeria.

- Professional qualifications:

- a) Bachelor of Engineering (ABU) (1974/75);
- b) Master of Science (B'Hon. U.K.) 1978;

- Publications:

- Work experience:

- i) Sokoto State Water Board Jan. 1976 - August 1977;
- ii) University of Sokoto Aug. 1980 to date

- Research experience:

- i) The resettlement problems of the displaced villages on the new permanent site of the new University.
- ii) The provision of safe drinking water at the new University permanent site

37. Name: Maiwada Liman SULEIMAN

- Institutional address:

Institute for Agricultural Research
Ahmadu Bello University
P. M. B. 1044
Zaria, Nigeria

- Professional qualifications:

- a) B. Eng., (Agri) ABU, Nigeria, 1977
- b) Cert. Crop. Prot. Univ. London, 1979
- c) M.Sc. Agric. Eng. Cranfield, 1983

- Publications:

- i) Comparison of some selected factors influencing the selection of spraying machine for a particular situation
The Nigerian Journal of Agricultural Extension (sent for publication)
- ii) Using the high volume sprayers.
New Nigerian Newspaper (sent for publ.)
- iii) Preparation of locally available mixtures to simulate chemical formulations for use in evaluation of spraying machines (unpublished)

- Work experience:

- i) Research in crop protection machinery
Ahmadu Bello University, Zaria
1978 to date
- ii) Teaching crop protection machinery
1983 to date

- Research experience:

Design of suitable spraying equipment for use of minimum volume of pesticide to minimize environmental pollution and improve distribution of chemical spray in the field

38. Name: Jacob P. VOH

- Institutional address:

Institute for Agric. Research
Faculty of Agriculture
Ahmadu Bello University
Zaria, Nigeria

- Professional qualifications:

- a) B.Sc. (Soc) 1970
Ahmadu Bello University
- b) M. Sc. (Rural Sociology) 1974
Iowa State University
- c) Ph.D. (Rural Sociology) 1980
Iowa State University

- Publications:

- i) Strategies for improving agricultural production among farmers displaced by a man-made lake: The case of Tiga Dam in Kano State of Nigeria. Proceedings of the 4th Afro-Asian Regional Conference of ICID, Vol. II (Pub. 28):353-365
- ii) Rural Responses to Development Projects: A Study of factors affecting forced migrants' responses to population relocation in Kano State of Nigeria. Chapter 23 pp. 160-168 in Femi Odekunle (ed) Mobilization of Human Resources for National Development (1986)

- Work experience:

Institute for Agricultural Research
Work on Problems of farmers displaced by man-made lakes, 1976-1980

- Research experience:

Problems of farmers displaced by man-made lakes

39. Name: Uche G. Wokocha.

- Institutional address:

Ministry of Finance & Planning,
Petroleum & Gas Division,
P.M.B. 5099,
Port Harcourt, Rivers State,
Nigeria.

- Professional qualifications:

- a) B.Sc. (Biology) University of Wisconsin (USA) 1977;
- b) M.A. Environmental Studies, Bemidji State University,
Minnesota (USA) 1979;

- Publications:

- i) Ocean dumping
- ii) Off-road vehicles;
- iii) Coal;

- Work experience:

- i) Under Rivers State Government (Nigeria)- Directorate of
Flood, Erosion, Etc. 1980-1981, NYSC; Directorate of
Petroleum & Gas 1981-1982;
- ii) Ministry of Housing & Environment; Environmental Division
1982-1983;
- iii) Ministry of finance & Planning, Petroleum & Gas Division
1983 to present.

- Research experience:

- i) Oil Pollution abatement in the Rivers State;
- ii) Waste disposal; effluent discharge by industries;
- iii) Public enlightenment of resources, environmental issues

40. Name: R.C. YADAV

- Institutional address:

Agricultural Engineering Dept.
Ahmadu Bello University
Zaria, Nigeria

- Professional qualifications:

M. Tech. Soil & Water Engineering
1970
Indian Institute of Technology,
Kharagpur, India

- Publications:

- i) Rainfall simulator for tillage research in the tropics. Soil & Till. Res. 3:397-405
- ii) Biological harvesting: a method of enabling dryland crops to endure period of droughts. J. Arid. Env. 6:115-119
- .iii) Problems and prospects of rural water supply in Northern Nigeria. Paper presented at UNESCO conference on water resource mangement practices Nigeria

- Work experience:

- i) 15 years research work
- ii) 5 years at Central Arid Zone Research Institute, Jodhpur
- iii) 2 years Ministry of Hydraulics and Environment, Govt. of Algeria
- iv) 6 years Ahmadu Bello University, Zaria, Nigeria

- Research experience:

- i) Air pollution and wind erosion control measures
- ii) Stablilizing food production under rainfed farming
- iii) Rural water supply and rual sanitation in the South Eastern part of Algeria Project Planning and Design
- iv) Instrumentation for studying environmental effects on various aspects of agriculture

RWANDA

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Division de la Promotion Familiale
Habitat et Environnement, Ministère
Des Affaires Sociales et du
Développement Communautaire
B.P. 60
Kigali, Rwanda

1. Name: RWAMAKUBA, Andre.

- Institutional address:

Division Hygiène Publique et
Environnement Ministère de la Santé
Publique et des Affaires Sociales,
B.P. 84, Kigali.

- Professional qualifications:

- a) Diplôme de Médecin-Hygiéniste, option hygiène publique et sociale, Université Catholique de Louvain, 1982.
- b) Docteur en Médecine, Université Nationale de Rwanda, 1978.

- Publications:

- Work experience:

- a) Chef de Division de l'Hygiène Publique et Environnement, Ministère de la Santé Publique et des Affaires Sociales, Depuis Mai, 1984;
- b) Membre de l'équipe d'élaboration de stratégies sectorielles, 1987 - 1991, depuis avril 1985;
- c) Chef de la délégation rwandaise à la 13ème session du conseil d'Administration du PNUE, 1985.
- d) Participe à la 1ère Conférence Africaine sur l'Environnement au Caire, 1985.

- Research experience:

- a) Impact de l'environnement sur le poids à la naissance dans la région de Rwamagana en Préfecture Kibungu (Rwanda): Recherche en cours.

SAO TOME ET PRINCIPE

Name and Address of Government Environmental
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Ministro de Plan et Cooperacao
P.O. Box 168
Sao Tome & Principe

EXPERTS:

1. Name: LIMA DO ROSARIO DA TRINIDADE FERNANDO.

- Institutional address:

C.P. 67, Sao Tome.

- Professional qualifications:

- a) Licence e Geographie, Montpellier, 1983;
- b) Maitrise en Geographie et l'Amenagement de l'Espace, Montpellier, 1984;
- c) Diplome d'Etudes Superieures, specialisees de Teledetection et cartographie, Universite de Sciences et Technique, Paris, 1985.

- Publications:

- a) "La peri-urbanisation de la ville de Sao Tome", Montpellier, 1984.
- b) "L'Etat de l'Environnement a Sao Tome." Rapport, 1986.
- c) "Les diversite dans les cycle hydrologique a Sao Tome et Principe." Manuel des Principaux REGimes Hydrologique dans le mone. Stockholm, 1985.

- Work experience:

- a) Stagiaire a la Direction de Planification Physique de Sao Tome, Decembre 1983 - Mars 1984;
- b) Participation au 6eme Symposium International de l'Environnement et Teledetection. Paris, 1984.
- c) Reunion preparatoire pour la 1ere Conference Ministerielle Africaine sur l'Environnement, Caire, 1985.
- d) Reunion des experts nationaux sur l'environnement pour les pays Africain de langue officielle Portugaise, Bissau, 1986.
- e) Point focal pour le PNUE.

- Research experience:

- a) L'etude de la forme de l'occupation de l'espace en peripherie de la ville de Sao Tome, Amenagement local.
- b) Possibilite de l'utilisation des donnees satellites dans

l'etude de phenomenes en milieux heterogenes de petite dimensions.

- c) Preparation de missions de prise de vue aerienne rentable sur le plan economique, efficace sur le plan technique et siches sur le plan environnemental.
- d) Participation dans l'ellaboration du premier plan physique national.

SENEGAL

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Ministere de l'Urbanisme
de l'Habitat et de l'Environnement,
Building Administratif
Dakar, Senegal

EXPERTS:

1. Name: Bakary KANTE.

- Institutional address:

104 Rue Carnot, Dakar.

- Professional qualifications:

- a) Maitrise es Sciences Juridiques;
- b) Doctorat de Troisieme Cycle, Sciences de l'Environnement;
- c) Certificat de 'Universite de Gand (Belgique) sur la pollution de l'eau et du sol par l'industrie.

- Publications:

- a) Gestion des sols pour une meilleure protection de l'environnement. Memoire de D.E.A., 1981.
- b) "Erosion cotiere a rufisque: etat des donnees". Document prepare pour l'UNESCO, Sept., 1985.
- c) "Importance des technologies propres pour une developpement economique durable." Document prepare a l'occasion de la conference atelier sur le meme theme - Dakar 12 au 15 Fev. 1986.

- Work experience:

- a) Chef Division de Coordination de l'Environnement, 1981;
- b) Direceur de l'Environnement, 1984.

- Research experience:

SEYCHELLES

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Ministry of National Development
Victoria, Mahe- Seychelles

SIERRA LEONE

Name and Address of Government Environmental
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Ministry of Lands, Housing and
Country Planning
Freetown, Sierra Leone

EXPERTS:

1. Name: Professor Daniel E.B. CHAYTOR

- Institutional address:

Director, Institute of Marine Biology
and Oceanography (IMBO)
University of Sierra Leone
Freetown, Sierra Leone

- Professional qualifications:

- a) B.Sc. (Aberdeen)
- b) Ph.D. (London)

- Publications:

- i) "The hydrology and chemistry of the River Jong in Sierra Leone. Rev. Zool. Bot. Afr. 80, 325-339
- ii) "A Handbook for Science Teachers under Science Education programme for Africa (SEPA), Accra
- iii) "Reports of missions to African countries on Marine Science and Technology Development. ECA/UNESCO ciobsylktabt

- Work experience:

- i) 1985 to now Consultant with USAID, Washington on developing science education in developing countries
- ii) 1961 to 1985 - Started as lecturer in Zoology at Fourah Bay College, Senior lecturer
- iii) 1971 - Professor of Zoology at the University of Sierra Leone
- iv) 1969 to 1971 - Visiting Professor in Department of Biology, Massachusetts Institute of Technology, USA
- v) 1971 to now - served as consultant to UNESCO SEPA, FAO, ECA, USAID

- Research experience:

- i) 1962 to now - Chick embryology and then marine biology, survey of molluse, shrimps and fishes physiology
- ii) Zoology for B.Sc., M.Sc. Ph.D. Students in African Universities
- iii) 1970 to now - on science curriculum development, biology teacher training techniques and the integration of science and technology into development.

2. Name: Professor Norman H. Ayodele COLE

- Institutional address:

Chief of Environment
U.N. Economic Commission for Africa
P. O. Box 3005
Addis Ababa, Ethiopia

- Professional qualifications:

- a) B. Sc. (London)
- b) M. Sc. (London)
- c) Ph. D. (University of California)
- d) F.L.S. (London)

- Publications:

- i) The Vegetation of Sierra Leone, 196 pp. Mjale University College Press, Sierra Leone (reviewed in Kew Bulletin, 27, 206)
- ii) Problems of pollution in Africa: the need for environmental education, in Environment and Development in Africa, Ghana Academy of Sciences and Arts, Accra and UNESCO, Paris
- iii) Towards solving problems of environmental stress in developing countries. Environmental Management (USA), 3, 479-483

- Work experience:

- i) 1978 to now: Chief Environment in Africa Programme, UNECA, Addis Ababa, Ethiopia
- ii) 1965-1978: Started as lecturer in Botany, Mjale University College, Senior Lecturer in Botany at Fourah Bay College in 1969 and then Professor of Botany and Head of Department in 1975
- iii) Civil servant, Ministry of Agriculture, the Ministry of Education as Science Teacher and later Education officer in 1963

Research experience:

- i) 1962-1965: Ecophysiology of montane Mediterranean plant species in Southern California
- ii) Microclimate and ecology of tropical plant communities in Africa
- iii) 1965 to now - Environmental Problems of African countries and science education
- iv) 1973 to 1980 - Supervision of research theses for about 20 honours botany graduates and 3 M.Sc. students.

3. Name: Prof. Victor O.I. JOHNSON

- Institutional address:

Professor of Science Education
Makarere University
P. O. Box
Kampala, Uganda

- Professional qualifications:

- a) B. Sc. (Leeds)
- b) P.G.C.E. (London)
- c) Ph. D. (Univ. Illinois)

- Publications:

- i) The interaction of science, technology and education for environmental quality control, in science and technology education Newsletter, No. 7, UNESCO/ROSTA, Nairobi
- ii) Relevance of environmental education and training in agriculture. Environment International, 4, Pergamon Press, Oxford, United Kingdom
- iii) Perspectives on Environmental Education. Mazingira: International Journal for Environment and Development, 4, Nos. 3-4

- Work experience:

- i) 1983 to now: Professor Science Education at Makerere University, Kampala, Uganda
- ii) 1977-1981: Chief of Environmental Education and Training at United Nations Environment Programme (UNEP) Nairobi
- iii) 1972-1977: Consultant in Science Education to UNEP, UNESCO, USAID (Peace Corp)
- iv) 1966-1976: Started as Research fellow in 1966, became

Director of Educational Research at the University of
Sierra Leone's Institute of Education, Freetown

- v) 1956-1966: Science Teacher, later vice principal at a
secondary school, Sierra Leone

- Research experience:

- i) 1972 to now - Research on education and development for
environmental management
- ii) 1966 - 1976 - On microanalytical procedures in science
education teaching and research
- iii) 1972 to now - On challenges and opportunities for
environmental education and training in developing countries

4. Name: Dr. Cyrus A. MACFOY

- Institutional address:

Senior Lecturer in Botany
Fourah Bay College
University of Sierra Leone
Freetown, Sierra Leone

- Professional qualifications:

- a) B.Sc. (London)
- b) M.S.C. (London)
- c) D.I.C. (London)
- d) Ph.D. (London)

- Publications:

- i) Medicinal plants in Pujehun District of Sierra Leone.
J. Ethno Pharmacol 8, 215-223;
- ii) Medical ethnobotany of Gloucester village (Sierra
Leone). Africana Research Bulletin, xvi, 2-14;
- iii) Medicinal plants of Sierra Leone - Monography

- Work experience:

- i) 1969 - 1971: Science teacher in a secondary school,
Sierra Leone;
- ii) 1977 - 1979: Demonstrator in Plant Pathology and Applied
Biology, University of London;
- iii) 1979 to now - Started as Lecturer in Botany at Fourah
Bay College, now Senior Lecturer in Botany since 1985.
Has trained several honours Botany graduate and one
M.Sc. graduate in microbiology.

African Environmental Experts:
E/ECA/ENV/38, December 1986.

- Research experience:

- i) 1976-1978 - Doctoral rthesis on phytoalexins and fungal resistance and susceptibility of red clover plant
- ii) 1979-now - Study of ethnobotanical and ethnopharmacological aspects of medicinal plants
- iii) 1981-now - Biochemical basis for host plant resistance in integrated pest management
- iv) 1981-now - Ecophysiology of local firewood species for energy content
- v) 1978-now - Antifungal, insecticidal and antibacterial compounds in plants

5. Name: Professor Modupe O. WILLIAMS

- Institutional address:

Professor of Zoology
Fourah Bay College
University of Sierra Leone
Freetown, Sierra Leone

- Professional qualifications:

- a) B.A. Mod)
- b) M.A. (Dublin)
- c) Ph.D. (Glasgow)

- Publications:

- i) The Helminth parasits of dogs in Freetown, Sierra Leone
Bull. Expizoot. Dis. Afr. 12, 471-472
- ii) Some helminth parasites of freshwater fishes of the
Freetown Peninsula. Bulletin de IFAN, 37, 563-575
- iii) A qualitative and quantitative survey of seasonal
dynamics of gastro-intestinal helminth parasites in
livestock in Sierra Leone. Bull. Anim. Hlth. Prod. Afr.
(in press)

- Work experience:

- i) 1962 to nwo: Started as lecturer in zollogy at Fourah Bay
College, became Professor of Zoology and Head of the
Department in 1971
- ii) 1975 - 1978: Served as Dean, Faculty of Pure and Applied
Sciences
- iii) 1972 to now: Has also served as External Examiner in

Zoology for various universities in Africa and Examiner
in Biology for the West African Exams Council

- Research experience:

- 1) 1978 to now: Has trained over 30 honours zoology graduates,
7 M.Sc. and 3 Ph.D. students in Zoology at the University
of Sierra Leone
- 11) 1960 to now: Has conducted research on animal parasites
in UK, Sierra Leone, USA, Nigeria, with over 30 scientific
publications in international journals

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E/ECA/ENV/38, December 1986.

SOMALIA

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SUDAN

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National Committee for the
Environment, National Council
for Research
Khartoum, Sudan
Phone: 75747/70701

EXPERTS:

1. Name: Mustafa Mohammed KHO GALI

- Institutional address:

Associate Professor
University of Khartoum,
Khartoum, Sudan

- Professional qualifications:

- a) B.A. (hons) University of K
Khartoum, 1960
- b) Diploma in Education, University
of Edinburgh, 1962
- c) M.A., University of Wales
(University College of Swansea) 1964
- d) Diploma in Demography Cairo
Demographic Centre, 1970
- e) Ph.D., University of Khartoum. 1980

- Publications:

- i) Pastoralism and Desertification
- ii) Environmental context of development in
the Sudan
- iii) Anti-Desertification Aspects in the Sudano-
Sahelian Region
- iv) Dura production and its parasitic buda in the
Sudan, etc.

- Work experience:

- i) Lecturer in Geography. Bakht er Ruda
Institutef of Educatio, 1960-61
- ii) Lecturer in Geography. Omdurman High
Teachers Training Institute, 1964-1965
- iii) Social Science Xpert, UNESCO (stationed
in Libya) 1971-1974
- iv) Head, Geography Department, University of
Khartoum, 1975-77

v) Permanent Member of the Academic Staff
Associate Professor
University of Khartoum

- Research Experience:

- i) The Impact of Nomadism and Agriculture
on Desert Encroachment
- ii) The Settlement of Nomads
- iii) The Problem of Siltation in Khashm el
Girba Reservoir. etc.

SWAZILAND

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Mbabane, Swaziland

TOGO

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Des Forets et de l'environnement
Ministere de l'Amenagement Rural
B. P. 355
Lome, Togo

EXPERTS:

1. Name: Kwablah ATTIOGBE

- Institutional address:

California Community College
6539 Gwin Road
Oakland, Ca. 94611

- Professional qualifications:

- a) B.Sc. Biology-Chemistry, Belmont College, Nashville.
Tennessee
- b) M.A. Biology. California State University, Hayward

- Publications:

- i) Food habits and other aspects of the black-tailed deer[®]
Master's thesis
- ii) Thermoregulation in a free-ranging domestic goat on a
central valley ranch, California, Manuscript
- iii) The ecology and population dynamics of the western
grey squirrel. Work in progress

- Work experience:

- i) Taught biology, zoology, ecology and environmental
science. Merritt College, Oakland
- ii) Taught wildlife management and ecology. California
State University. Hayward

- Research experience:

- i) Conducted research on human dietary needs and energy
balance. Department of Nutrition, University of California,
Berkeley
- ii) Studies physiological ecology of free-ranging lizards and
reptiles. Researched management and ecology of large
mammals. Assessed the impact of habitat manipulation
on wildlife. Ecological Field Station, Hayward.

TUNISIA

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Division de l'Environnement
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Nationale
Tunis, Tunisie

UGANDA

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Ministry of Housing and
Urban Development
P.O. Box 7122
Kampala, Uganda

EXPERTS:

1. Name: Dr. Kennuel OGWARO

- Institutional address:

Faculty of Agriculture
Makerere University
P. O. Box 7062
Kampala, Uganda

- Professional qualifications:

- a) M.Sc. (Entomology) Moscow State University 1972
- b) Ph.D. Entomology, Nairobi University, 1979

- Publications:

- a) Pest control

- Work experience:

- 1) Pest Control Consultant
- ii) Senior Lecturer (Entomology)

- Research experience:

- 1) Imporation (legal & illegal) of chemicals and the
extent of pesticide use by rural population of Uganda

2. Name: Edward Bitanywaine Rugumayo

- Institutional address:

P. O. Box 53063
Nairobi
Kenya

- Professional qualifications:

- a) B.Sc. (London)
- b) Dip Ed. (Liverpool)
- c) UNESCO Certificate in Biology Curriculum
Methods (University College of Cape Coast)

- Publications:

- i) An Investigation of the Resources and Materials for
the Teaching of Biology in Zambian Schools
- ii) Post-Independence Education in Uganda (35pp)
A paper presented at the Rabat Conference of the African
Association of Political Scientists (AAPS)
- iii) Two articles in Biological Education for Community
Development Edited by P.J. Kelly and G. Schaefer,
published by UNESCO with the objective of developing
integrated science teaching for rural development.
- iv) Environmental Education in the Training of Basic
Education Teachers in Africa. Journal of AAEA
Vol. 1, No. 3, 1983

- Work experience:

- i) Acting Dean, School of Education, University of Zambia,
1978
- ii) Head, Department of Education, University of Zambia,
1973-1977
- iii) Senior Lecturer in Science Education, University of
Zambia, 1973-1979

- Research experience:

- i) Health Education through Biology
- ii) Constraints on Effective Biology Teaching
- iii) Science and Technology in developing countries
- iv) Environmental education and training in Third World
countries. with particular emphasis on teacher
and adult education.

3. Name: Dr. E.M. Tukahirwa

- Institutional address:

Department of Zoology
Makerere University
P. O. Box 7062
Kampala, Uganda

- Professional qualifications:

- a) B.Sc. 1972 Makerere, Uganda
- b) M.Sc. 1975 Makerere, Uganda
- c) Ph.D. 1979 Cambridge, U.K.

- Publications:

- i) Pesticides and their utilisation: a profile for Uganda
Insect. Sci. Applic. 5(3), 183-86
- ii) Trends in pesticide usage in Uganda (in press - paper
presented at the international conference on management
of pests and pesticides, 1985 at Ching Mai, Thailand)
- iii) Pesticides and pollution in Uganda (paper presented
at Seminar on Renewabel Natural Resources. Ecology and
Conservation in Uganda - 1985 at Kampala)

- Work experience:

- i) Environmental analysis of pesticide pollution,
1981 to present in Uganda
- ii) Research on perception of pests and pesticide issues
in Uganda 1981 to present

- Research experience:

- i) Research on perception of pests and pesticide

UNITED REPUBLIC OF TANZANIA

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Management Section, Ministry
of Lands, Housing and Urban
Development
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EXPERTS

1. Name: John N. KUNDAELI

- Institutional address:

Chemin de la Plantaz 11
1110 Morges
Switzerland

Mombo Parish
Box 476
Moshi, Tanzania

- Professional qualifications:

- a) B.Sc. Colorado State University, 1962-1965
- b) M.Sc. Colorado State University. 1967-1969

- Publications:

- i) Management plans for wildlife conservation. Paper presented at the FAO/AFC ad hoc Working Party on Wildlife Management, Fort Lamy, Chad, 6-11 February 1967. Doc: FO:AFT/WL - 67/15, 5 p.
- ii) Desert Cotton tail use of natural and Modified Pinyon-Juniper Woodland. Journal of Range Management, Volume 25(2)
- iii) Commercial Exploitation of Tree Hyrax on Mt. Kilimanjaro. Tanzania Notes and Records Nos. 79 and 80, pp. 57-64
- iv) Conservation of the Coastal and Marine Ecosystems and Living Resources of the East African Region. Sectoral Report based on joint UNEP Mission to the East Africa Region. UNEP Regional Seas Reports and Studies No. 11

- Work experience:

- 1) 1965 - 1967 Acting Principal Game Warden/Wildlife Biologist in the Western Zone Tanzania

- ii) 1969 - 1969 Lecturer, College of African Wildlife Management, Mweka, Tanzania
 - iii) 1976 - 1981 IUCN Regional officer for Africa
 - iv) 1981 Oct-Dec - UNEP/IUCN Conservation Expert, Joint UNEP/UN/UNESCO/FAO/WHO/UNIDO/African Region (Regional Seas Programme)
 - v) 1982 Oct-Dec, Feb-Sep; 1983 Jan-March - Consultant UN Joint Inspection Unit (JIU), Geneva, Switzerland
- Research experience:

ZAIRE

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Chef du Department,
Ministere de l'Agriculture
Developpement Rural et
Environnement
B.P. 12348
Kinshasa 1, Zaire

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E/ECA/ENV/38, December 1986.

ZAMBIA

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Natural Resources Department
P. O. Box 50042
Lusaka, Zambia

ZIMBABWE

Name and Address of Government Environmental
Co-ordination Machinery

Ministry of Natural Resources
and Tourism,
P.O. Box 8070,
Causeway, Harare, Zimbabwe.

1. Name: Shem Chaibva.

- Institutional address:

Dept. of Natural Resources.
P. B. 7728,
Causeway, Zimbabwe.

- Professional qualifications:

a) B.A. (Hons.) University of Zimbabwe (1976).

- Publications:

1) "Natural regeneration as an extension of tree planting"
The farmer magazine.(

- Work experience:

1) Department of Natural Resources, Regional Secretary
1982 to present.

- REsearch experience:

1) "Pollution of the Zambezi Waters";

2. Name: Oliver Chapeyama.

- Institutional address:

Department of Natural Resources.
P. O. Box 506,
Mutare, Zimbabwe.

- Professional qulaifications:

a) B.A. University of Zimbabwe, 1976;

- Publications:

- Work experience:

- i) High School Geography master 1977-1981
- ii) Regional Secretary, Department of Natural Resources
Manicaland Province. Zimbabwe, 1982 to date

- Research experience:

- i) Study of conservation problems in manicaland province
for inclusion in five year national development plan
- ii) Deforestation in river catchments

3. Name: Davison Joe Gumbo

- Institutional address:

The Department of Natural Resources
P. O. Box 8070 Causeway
Harare, Zimbabwe

- Professional qualifications:

- a) B.A. - CDE (Geography) Post Grd. Dip. Nat. Resources
- b) UBS - Botswana; Roseworthy Aluric College, Australia

- Publications:

- Work experience:

- i) Environmental monitoring, environmental impact
assessments
- ii) Produced a land use plan for mountain range 1982-1986

- Research experience:

- i) Integrated land use plan for the wedla mountains
Zimbabwe
- ii) Environmental impact assessment of a chemical pulp and
paper mill

4. Name: Irvin Douglas Kunene

- Institutional address:

The Department of Natural Resources
P. O. Box 8070, Causeway
Harare, Zimbabwe

- professional qualifications:

- a) B.Sc. (Hons) Environmental Science, 1981
Plymouth Polytechnic, England, U.K.

- Publications:

- Work experience:

- i) 1983 to 1986 - Environmental monitoring, Environmental Impact Assessments, Soil Erosion survey

- Research experience:

- i) DDT residues in the Zambezi Valley Area
- ii) national soil erosion survey

5. Name: T.P.Z. Mpofu

- Institutional address:

Department of Natural Resources
P. O. Box 8070, Causeway
Harare, Zimbabwe

- Professional qualifications:

- a) B.A. (Botswana)
- b) M.Sc. (United Kingdom)

- Publications:

- Work experience:

- i) Assistant Director, Environmental awareness, 1981
- ii) Deputy Director, 1981 to present
- iii) Acting Director, July 1985 to present

- Research experience:

- i) Evaluation of land husbandry (Rhodesia)
- ii) Evaluation of Botswana Tribal Grazing Land Policy
- iii) Provided information to UNEP on Desertification in Zimbabwe

6. Name: Songeni Skube

- Institutional address:

African Environmental Experts:
E/ECA/ENV/38, December 1986.

Department of Natural Resources
P. O. Box 8070, Cuaseway
Harare, Zimbabwe

- Professional qualifications:

- a) B.A. (Hons) Development Studies Field (Natural Resources and Economics) Univ. of East Anglia, U.K., 1980

- Publications:

- Work experience:

- i) Environmental Extension and Education
Environmental Monitoring

- Research experience:

A N N E X

Q U E S T I O N N A I R E

Hereunder are the questionnaire to fill in either to update the information contained in the entries or for those whose names do not appear in this Directory. Fill it in which of the two situations apply, and return to:-

The Chief.
Environment Section,
U.N.E.C.A.,
P.O. Box 3001,
Addis Ababa,
Ethiopia.

- Name:

-Institutional address:

- Professional qualifications:

Publications: (include only five that are relevant to
environmental issues.)

- Work experience:

African Environmental Experts:
E/ECA/ENV/38. December 1986.

- Research experience:

Litho in United Nations Addis Ababa (UNECA) 087-239 December 1987 . 500